Good Practices in Community Engagement and Readiness

Compendium of Case Studies From Canada's Minerals and Metals Sector

Energy and Mines Ministers' Conference

Sudbury, Ontario
August 2014

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The *Compendium of Case Studies* was produced for the 2014 Energy and Mines Ministers' Conference by officials from the federal, provincial and territorial governments, through the Intergovernmental Working Group on the Mineral Industry. An external multi-stakeholder advisory committee composed of a number of representatives from academia, industry, and Aboriginal organizations was consulted.

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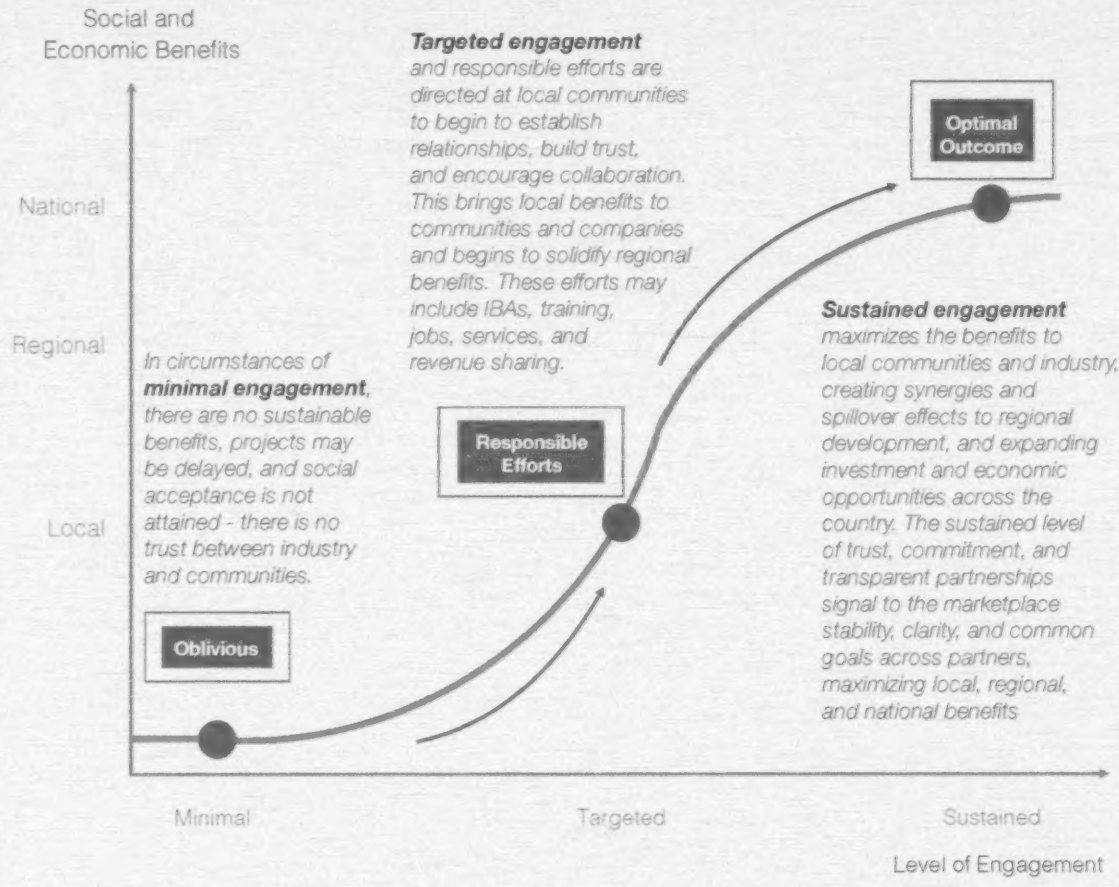
Highlights

Across Canada, there are various examples of initiatives and projects that can be considered good practices in community engagement and readiness or for which good practices were applied. This Compendium comprises 22 case studies that highlight good practices that have been implemented by governments, industry, and communities across Canada. They span the mineral development sequence, ranging from the execution of geo-mapping to exploration, mine development and production, all the way to mine closure and the reclamation of depleted mine sites. Examples of good practices that can be drawn from the case studies include:

- **Pre-exploration:** Community-based guides and mineral development policy documents help set general guidelines for engagement between local communities and resource development companies looking to work on their territory. They improve the readiness of local communities heading into negotiations and allow companies to clearly understand what is needed for projects to proceed.
- **Exploration:** Having an exploration agreement in place establishes a strong foundation and provides reassurance to local communities that the company is committed to working closely with them throughout the entire exploration project.
- **Development:** Communities that are involved in a project are more likely to work toward its success. Entering into a formal agreement with a community affected by a project can provide a competitive advantage to a company by limiting disruptions, reassuring investors and non-governmental organizations (NGOs), and accessing local labour and knowledge.
- **Operation:** Ensuring that communities have regular, formal means to express their concerns and to provide input into decisions by companies and regulators helps build trust.
- **Closure and Post-closure:** The restoration of orphaned and abandoned exploration and mine sites can provide an opportunity for partnerships between governments, communities, and industry. In addition to positive environmental impacts, these projects can provide jobs and skills for local communities and demonstrate commitment to responsible development.
- **At Every Step of the Mineral Development Sequence:** Sustaining relationships with affected communities and other stakeholders throughout the life of a project's operations – not simply during the initial feasibility and assessment phase – improves risk management and will result in better outcomes.

While the initiatives highlighted in the case studies are unique to their respective contexts, one important aspect they reveal is that early and sustained engagement and partnerships among governments, industry, and communities are critical at each stage of the mineral development sequence. Sustained engagement and partnership help to alleviate some of the issues and concerns that act as barriers to advancing resource projects. Relationships developed through collaboration and dialogue among multiple stakeholders, communities, and governments offer the opportunity to gain a better reciprocal understanding, establish trust, develop respect, and identify mutually beneficial goals in a transparent manner.

Sustained Engagement to Maximize Benefits


Social and Economic Benefits
National
Regional
Local
In circumstances of **minimal engagement**, there are no sustainable benefits, projects may be delayed, and social acceptance is not attained - there is no trust between industry and communities.
Oblivious
Targeted engagement and responsible efforts are directed at local communities to begin to establish relationships, build trust, and encourage collaboration. This brings local benefits to communities and companies and begins to solidify regional benefits. These efforts may include IBAs, training, jobs, services, and revenue sharing.
Responsible Efforts
Optimal Outcome
Sustained engagement maximizes the benefits to local communities and industry, creating synergies and spillover effects to regional development, and expanding investment and economic opportunities across the country. The sustained level of trust, commitment, and transparent partnerships signal to the marketplace stability, clarity, and common goals across partners, maximizing local, regional, and national benefits
Minimal
Targeted
Sustained
Level of Engagement

Sustained engagement among different partners is critical to the successful realization of mining projects, to maximize local benefits, and to acquire the buy-in and acceptance of local communities over the long term. For many communities, environmental sustainability and prevention of significant environmental harm are necessary conditions for their support. Communities also expect long-term economic benefits that will translate into improvements in the quality of life of community members. In this regard, the **early engagement and dialogue** in the mineral development sequence among industry, communities and governments, and a **sustained and robust level of engagement over time** are critical factors to build trust, foster inclusion and maximize economic benefits locally, regionally and nationally. Sustained local engagement underpins the successful attainment of economic, social and environmental goals.

Introduction

Canada's vast endowment of minerals and metals provides the country with immense possibilities to meet growing global demand and to strengthen its international standing as a major mining jurisdiction in the years to come. Emerging economies, global population growth, security of supply concerns, and supply disruptions will continue to elevate the importance of minerals and metals. Canada is therefore facing a significant opportunity to further transform its mineral wealth into long-lasting prosperity for all Canadians.

However, different barriers and issues require collaboration and commitment from governments, industry, and communities[1] to help maximize the local benefits of projects. Mining development is a large and complicated endeavour for industry, governments, and communities. It requires effective and clear regulatory mechanisms and governance, private and public investment, adequate infrastructure to extract and bring commodities to markets while serving local communities, recruitment and retention of highly qualified personnel, and effective designs and technologies to minimize environmental impacts. It also entails the engagement of communities, which is a critical element to earn a social licence to operate.

Furthermore, as noted in recent reports, such as Douglas Eyford's report to the Prime Minister, *Forging Partnerships Building Relationships*,[2] and Canada's Public Policy Forum's *Building Authentic Partnerships: Aboriginal Participation in Major Resource Development Opportunities*,[3] most communities understand the economic opportunities from natural resource development but are often not prepared or ready to fully benefit from them because of a number of barriers they face. "Community readiness" in this context is the capacity of a community to take advantage of resource development opportunities in its proximity. It implies that communities have the tools and ability to maximize benefits and mitigate potential negative impacts from resource development activity. The level of a community's readiness for mineral development depends on many contributing factors, including, but not limited to skills and educational attainment, access to capital and business partnerships, business and financial literacy, physical infrastructure, and community well-being. As well, governments and communities have to plan for the social and environmental requirements and oversight needed once mining operations see fruition. This may include strengthening health services, local infrastructure, housing, security and policing, and educational and medical services.

Improving community engagement and readiness is therefore one of the key elements in maximizing the local benefits of activities related to mineral development. Consequently, the federal, provincial, and territorial governments, through the Intergovernmental Working Group on the Mineral Industry, have produced this *Compendium of Case Studies* to highlight good practices[4] in community engagement and readiness. The Compendium was developed in consultation with an external multistakeholder advisory committee (EAC) composed of a number of representatives from academia, industry, and Aboriginal organizations.[5]

1 For the purpose of this report, the words "communities" and "local communities" are used interchangeably and refer to both Aboriginal and non-Aboriginal communities, unless otherwise specified.

2 Douglas R. Eyford, *Forging Partnerships Building Relationships: Aboriginal Canadians and Energy Development*, November 2013, nrcan.gc.ca/sites/nrcan.gc.ca/files/www/pdf/publications/ForgPart-Online-e.pdf.

3 Canada's Public Policy Forum, *Building Authentic Partnerships: Aboriginal Participation in Major Resource Development Opportunities*, 2012, ppforum.ca/sites/default/files/Aboriginal%20Participation%20in%20Major%20Resource%20Development_ENG_3.pdf.

4 The Compendium refers to "good practices" instead of "best practices" as a "best practice" generally refers to a practice that is the most effective and efficient in achieving an objective.

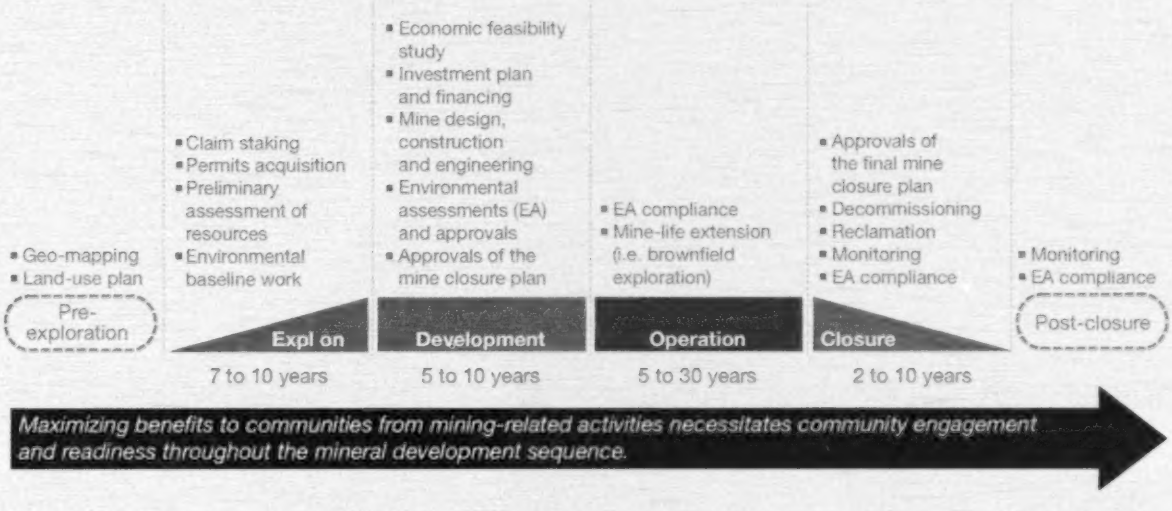
5 The members of the EAC for the Compendium were Dr. Ben Bradshaw (University of Guelph); Ben Chalmers (The Mining Association of Canada); Lesley Williams (Prospectors and Developers Association of Canada); Hans Matthews (Canadian Aboriginal Minerals Association); Dr. Wes Cragg (Canadian Business Ethics Research Network, York University); and Ed Moriarty (Mining Industry NL).

It seeks to achieve three main objectives:

- Identify and promote some of the initiatives by governments, industry, and communities that have yielded positive results and have helped improve, or could contribute to improving, community engagement and readiness for mining-related activities across Canada for both Aboriginal and non-Aboriginal communities;
- Disseminate good practices across jurisdictions to enhance the knowledge base and facilitate the steady, productive, inclusive and responsible development of resources; and
- Leverage good practices by industry, communities, and governments across Canada by identifying success factors in initiatives that have helped improve community engagement and readiness under different circumstances.

The Compendium uses the mineral development sequence (see Figure 1) as the framework for the case studies since efforts to improve community engagement and readiness are unique for each community, project, and stage along the mineral development sequence.

Figure 1: Mineral Development Sequence



The 22 case studies in this Compendium were selected on the basis of input from the federal government, provinces and territories, and the EAC. The Compendium also builds upon a literature review and previous comparable exercises, particularly the 2008 report to Energy and Mines Ministers, *Aboriginal Engagement in the Mining and Energy Sectors: Case Studies and Lessons Learned.*[6]

The Compendium is organized into two sections:

- **Section I** provides an overview of the global context and the socio-economic contributions of the minerals and metals sector in Canada and highlights the importance of community engagement and readiness to maximize the benefits to communities and stakeholders.
- **Section II** contains the case studies and provides an overview of the key findings that can be drawn from them.

6 Aboriginal Engagement Task Group of the Intergovernmental Working Group on the Mineral Industry, 2008, *Aboriginal Engagement in the Mining and Energy Sectors: Case Studies and Lessons Learned*, cberm.ca/kr/One.aspx?objectId=15380145&contextId=677979&lastCat=10522102.

Finally, it is important to note that this Compendium is not an exhaustive representation of all of the good practices in community engagement and readiness in Canada's minerals and metals sector. Also, while the case studies offer an opportunity for others to learn and draw from the unique contexts of each project, project stage, and affected community, they do not provide for a transferable or replicable step-by-step approach to community engagement and readiness. Each circumstance is different. Nevertheless, learning from different and diverse experiences will expand the knowledge base across jurisdictions to help facilitate the responsible and sustainable development of Canada's natural resources. In this regard, sustaining local engagement with communities is critical to build trust, promote local inclusion, and ensure common goals among the various partners involved in resource development.

I. Overview of the Context

Global Context for Canada's Minerals and Metals Sector

Despite a bumpy and uneven global economic recovery[7] and short-term economic fluctuations, there are various elements that, over the long term, are expected to continue to put upward pressure on the demand for commodities and their respective prices.

From a demand side, population growth and a rising middle class in emerging economies will raise the demand for natural resources. The current world population of more than 7.1 billion is projected to reach 9.6 billion by 2050 with most of the increase originating from emerging economies (see Figure 2). This is accompanied by the rapid economic expansion of emerging markets, especially China and India, which could add up to 3.1 billion more middle-class consumers in the global economy by 2030.[8] A rising middle class will see its purchasing power increase and will demand more goods and services in the form of cars, appliances, electronics, housing, and improved nutrition. A rising middle class will also drive an expansion of urban infrastructure in the form of roads, buildings, bridges, ports, telecommunications, and a wide variety of other goods and services. Some estimates indicate that $57 trillion in infrastructure investment will be required between 2013 and 2030 simply to keep up with projected global gross domestic product (GDP) growth.[9] In addition, according to projections by the United Nations, more than 80 percent of the world's middle class will reside in developing countries and will account for 70 percent of total consumption expenditures.[10] The striking transformation of a large number of developing countries into economic superpowers with growing geopolitical influence will intensify global changes and the importance of natural resources.

From a supply side, easily accessible high-grade global ore deposits are being depleted and are increasingly more costly to extract (i.e. because of deep mining, rising labour and input costs) or are located in more challenging geopolitical locations, restricting industry's capacity to bring commodities to markets. However, it has become apparent that the race for resources is also a race to innovate. Technological innovations have the potential to enhance the extraction of resources, reduce costs, and ignite a new era of resource development opportunities. This is exemplified in North America with new technological advancements that have changed the global landscape around energy security and the importance of unconventional oil and gas resources.

In addition, other factors are expected to have an impact on supply and demand conditions, including intensified geopolitical risks, wars, or unrest in resource-rich regions; policy measures that omit property rights and limit foreign direct investment; and unpredictable events such as extreme weather patterns and natural disasters.[11] All of these factors have the potential to enhance opportunities and pressures on how we responsibly develop Canada's natural resources, especially as many of the country's regions are underexplored but hold large reserves of resources.

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7 According to the International Monetary Fund's World Economic Outlook, October 2013, the world economy has entered yet another period of transition, with growth accelerating in advanced economies but slowing in emerging economies.

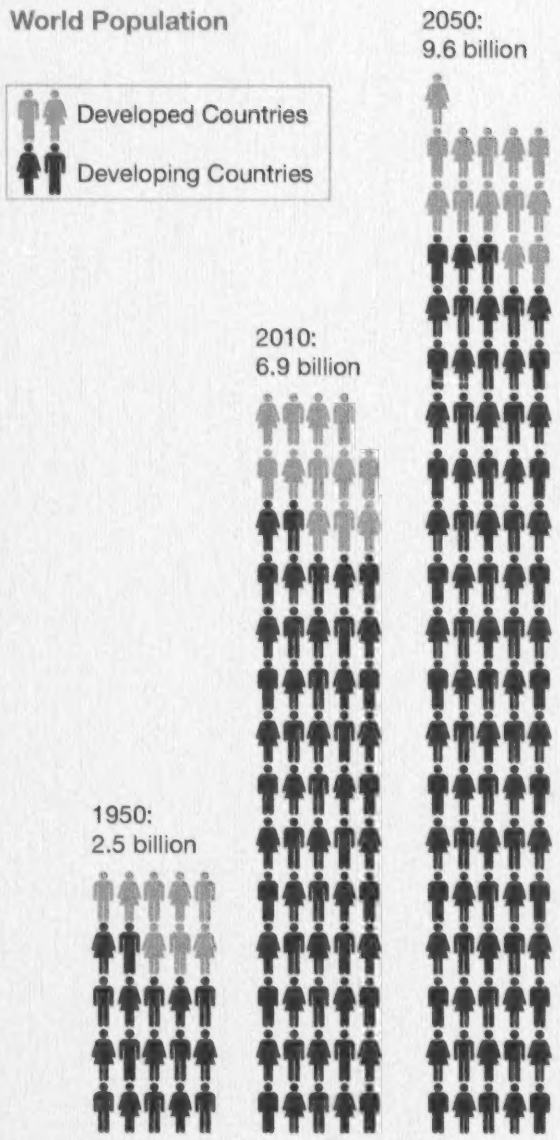
8 Organisation for Economic Co-operation and Development Working Paper No. 285, *The Emerging Middle Class in Developing Countries*, January 2010. The middle class is defined as "households with daily expenditures between US$10 and US$100 per person in purchasing power parity terms."

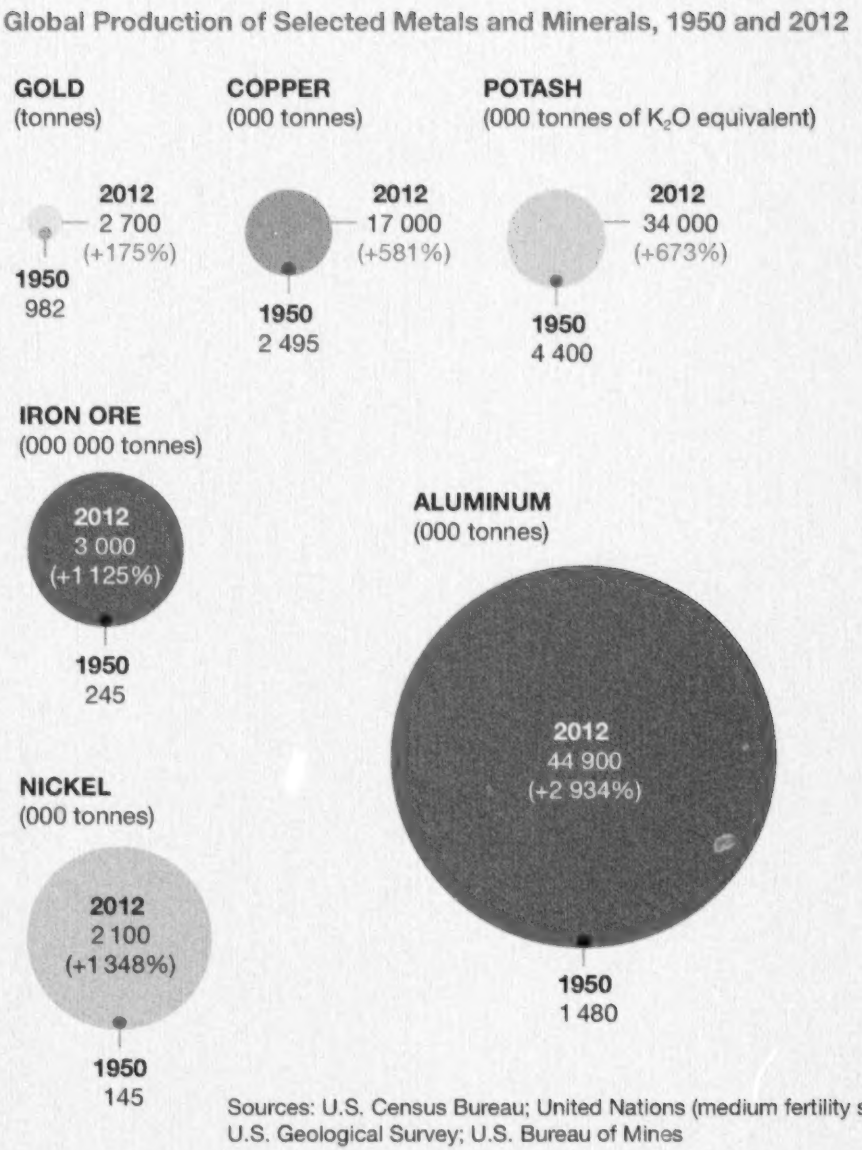
9 McKinsey Global Institute, *Infrastructure Productivity: How to Save $1 Trillion a Year*, January 2013.

10 Human Development Report 2013: *The Rise of the South: Human Progress in a Diverse World.*

11 As highlighted in recent reports, such as the U.S. National Climate Assessment (nca2014.globalchange.gov/) and by the United Nations World Meteorological Organization (wmo.int/pages/themes/climate/understanding_climate.php), the frequency and intensity of some extreme weather events are increasing and evidence demonstrates that the rapid warming of the past half century is due primarily to human activities.

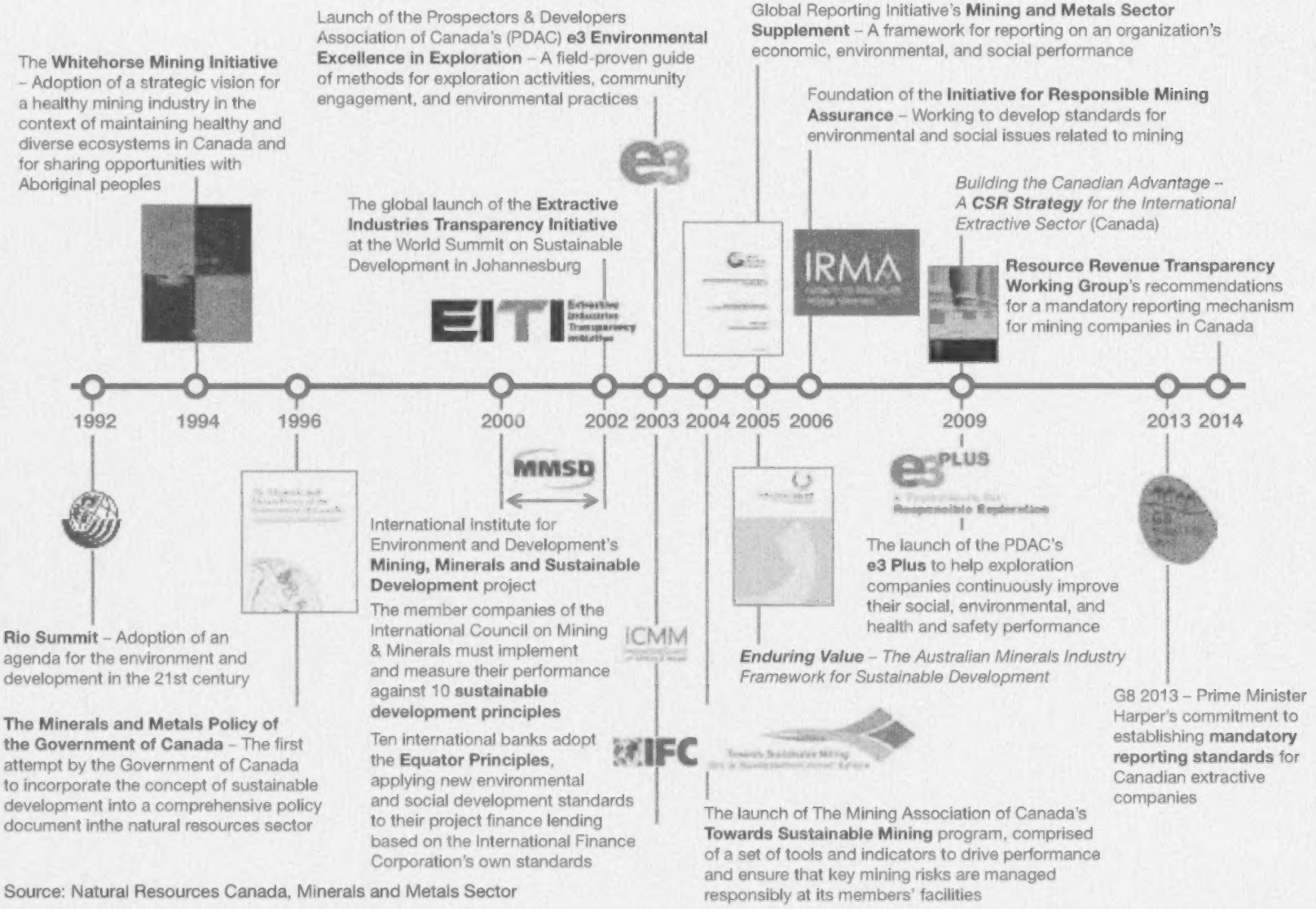
Figure 2: Long-Term Trends





Sources: U.S. Census Bureau; United Nations (medium fertility scenario); U.S. Geological Survey; U.S. Bureau of Mines

Figure 3: Advancing Sustainable Mining – Timeline of Major Initiatives by Governments, International Organizations, Industry, and Civil Society


The **Whitehorse Mining Initiative** – Adoption of a strategic vision for a healthy mining industry in the context of maintaining healthy and diverse ecosystems in Canada and for sharing opportunities with Aboriginal peoples
Launch of the Prospectors & Developers Association of Canada's (PDAC) **e3 Environmental Excellence in Exploration** – A field-proven guide of methods for exploration activities, community engagement, and environmental practices
Global Reporting Initiative's **Mining and Metals Sector Supplement** – A framework for reporting on an organization's economic, environmental, and social performance
Foundation of the **Initiative for Responsible Mining Assurance** – Working to develop standards for environmental and social issues related to mining
*Building the Canadian Advantage – A **CSR Strategy** for the International Extractive Sector* (Canada)
The global launch of the **Extractive Industries Transparency Initiative** at the World Summit on Sustainable Development in Johannesburg
Resource Revenue Transparency Working Group's recommendations for a mandatory reporting mechanism for mining companies in Canada
1992
1994
1996
2000
2002
2003
2004
2005
2006
2009
2013
2014
Rio Summit – Adoption of an agenda for the environment and development in the 21st century
The Minerals and Metals Policy of the Government of Canada – The first attempt by the Government of Canada to incorporate the concept of sustainable development into a comprehensive policy document inthe natural resources sector
International Institute for Environment and Development's **Mining, Minerals and Sustainable Development** project
The member companies of the International Council on Mining & Minerals must implement and measure their performance against 10 **sustainable development principles**
Ten international banks adopt the **Equator Principles**, applying new environmental and social development standards to their project finance lending based on the International Finance Corporation's own standards
***Enduring Value** – The Australian Minerals Industry Framework for Sustainable Development*
The launch of the PDAC's **e3 Plus** to help exploration companies continuously improve their social, environmental, and health and safety performance
G8 2013 – Prime Minister Harper's commitment to establishing **mandatory reporting standards** for Canadian extractive companies
The launch of The Mining Association of Canada's **Towards Sustainable Mining** program, comprised of a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at its members' facilities

Source: Natural Resources Canada, Minerals and Metals Sector

A growing momentum behind social and environmental performance to guide resource development

Equally relevant is the importance of environmental performance and the need to obtain a social licence to operate in order to successfully develop natural resources in a responsible and sustainable manner. Over the past two decades, the movement to ensure sustainable mining through industry, government, and civil society initiatives (see Figure 3) has gained considerable momentum both nationally and globally. In Canada, a shift happened in the 1990s with the integration of the emergent "sustainable development" discourse into a multistakeholder commitment to a social and environmental vision and goals in the *Whitehorse Mining Initiative Leadership Council Accord* in 1994 and into official policy in *The Minerals and Metals Policy of the Government of Canada: Partnerships for Sustainable Development released by Natural Resources Canada* (NRCan) in 1996. Similarly, the industry-sponsored Mining, Minerals and Sustainable Development (MMSD) project from 2000 to 2002 ushered in a period of widespread consideration of mining's environmental and social impacts upon communities and the subsequent release of various policy and industry association initiatives throughout the 2000s, including the following: the International Council on Mining and Minerals sustainable development principles (2003), The Mining Association of Canada's *Towards Sustainable Mining* (2004), and the Prospectors and Developers Association of Canada's *e3 – Environmental Excellence in Exploration* (2003) and *e3 Plus: A Framework for Responsible Exploration* (2008). In addition, a majority of the provinces and territories in Canada have released mineral resource strategies.[12]

Table 1: Canada's Global Production Ranking by Volume, 2013

Commodity	Global Production Rank	Share of Global Production
Potash	1st	30.3%
Uranium	2nd	15.4%
Cobalt	2nd	6.7%
Aluminum (primary)	3rd	6.1%
Tungsten	3rd	3.1%
Platinum Group Metals	4th	5.0%
Diamonds	5th	8.2%
Nickel	5th	9.0%
Zinc	7th	4.1%
Gold	7th	4.3%
Copper	9th	3.5%
Iron Ore	9th	1.4%
Silver	10th	2.8%

Sources: Natural Resources Canada; U.S. Geological Survey

Minerals and Metals Sector-driven Socio-economic Contributions and Opportunities in Canada

Canada possesses a significant and diverse endowment of mineral resources wealth from base metals and precious metals to coal, uranium, potash, rare earth elements, and diamonds. Today, Canada is one of the leading mining nations in the world, producing a wide array of commodities and ranking at the top in the global production of many commodities (see Table 1). As a result, the minerals and metals sector[13] makes a significant contribution to the Canadian economy (see Table 2), accounting for 3.4 percent of Canada's nominal GDP in 2013 and 20 percent of Canada's merchandise exports and providing employment for nearly 400 000 Canadians, many in remote communities.[14]

12 British Columbia (2012), Alberta (2002), Ontario (2006), Quebec (2011), Nova Scotia (2011), Newfoundland and Labrador (2011), the Northwest Territories (2013), and Nunavut (2010).

13 For the purpose of this report, the minerals and metals sector is defined by the North American Industry Classification (NAICS) codes, including:
- 212 – Mining and quarrying (excluding oil and gas);
- 21311B – Support Activities for Mining;
- 327 – Nonmetallic mineral product manufacturing;
- 331 – Primary metal manufacturing; and
- 332 – Fabricated metal product manufacturing.

14 Sources: Statistics Canada and Natural Resources Canada. Includes support activities for mining (NAICS 21311B).

The sector is an important employer of Aboriginal people, accounting for more than 10 000 jobs in 2012.[15] In addition, the minerals and metals sector stimulates and sustains important industry clusters and expertise across Canada:

- Toronto is a global hub for mining finance, as the TSX handled approximately 83 percent of the world's equity transactions in the past five years;
- Vancouver features the world's leading cluster of exploration companies;
- Major aluminum and iron ore firms have their offices in Montréal; and
- Saskatoon has become a global centre for uranium and potash expertise.

The sector also delivers many other direct socio-economic benefits to Canadians. For instance, between 2008 and 2012, mining firms contributed an average of $3.8 billion per year in revenues to governments,[16] which is critical to support social programs such as health, education, and public pensions. In addition, the sector provides high salaries (average weekly earnings of $1,170 in comparison to a total economy average of $911);[17] training that helps community members develop valuable skills; business development opportunities, since the sector often acts as a catalyst to stimulate additional economic opportunities; and infrastructure such as roads, ports, railways, and electricity generation facilities and transmission networks that help bring commodities to markets and spur economic development in remote communities (see Figure 4). In particular, the sector represents an important source of employment and business opportunities for Aboriginal communities across Canada, given that they are often located in proximity to many natural resource projects. It is also important to highlight that the minerals and metals sector is a capital-intensive, technology-driven industrial sector that plays an important role in Canada's "knowledge economy" as a purchaser, developer, and facilitator of advanced technologies.

Table 2: Minerals and Metals Sector Economic Contribution to Canada, 2013

Indicator	Contribution (Share of Canada's Total)
Direct Nominal GDP	$60.0 B (3.4%)
Direct Employment	383 140 (2.1%)
Average Weekly Earnings	$1,170
Capital Expenditures	$18.0 B (4.6%)
Exports	$88.0 B (20.0%)
Trade Balance	$18.1 B
Stock of Foreign Direct Investments in Canada	$66.4 B (9.7%)
Stock of Canadian Direct Investment Abroad	$81.5 B (10.5%)
Average Annual Government Revenue (2008–2012)	$3.8 B
Rail Car Traffic	129 Mt (48.4%)
International Marine Shipping (2011)	105 Mt (46.1%)

B = billions; Mt = million tonnes
Notes: The minerals and metals sector includes coal and uranium mining. Employment includes individuals employed in the support activities for mining subsector (NAICS 21311B). Exports exclude re-exports. Numbers may not add to totals due to rounding.
Sources: Natural Resources Canada; Statistics Canada

15 Source: Statistics Canada, Labour Force Survey, custom tabulation. Due to data limitations, the data do not include estimates for the territories and people living on reserves and settlements.

16 Sources: Natural Resources Canada calculations based on data from Statistics Canada (CANSIM Table 180-0003) and ENTRANS, *Revenues to Governments From the Canadian Mining Sector 2002-2011*, progressive-economics.ca/wp-content/uploads/2012/02/ENTRANS-Paper.pdf.

17 Source: Statistics Canada, CANSIM Table 281-0027

Figure 4: Minerals and Metals Sector Across Canada

Mineral Production Value
<4 4-8 >8 ($ billions)
Expenditures on Exploration and Deposit Appraisal
<100 100-500 >500 ($ millions)
Change From 2012
Mineral Production Value: $43.6 billion
Expenditures on Exploration and Deposit Appraisal: $2.3 billion
Jobs in the Minerals and Metals Sector: 383 140 (2013)
Producing Mines: 211 (mines that produced during 2013)
Non-ferrous Smelters and Refineries, Steel Mills, and Ferroalloy Plants: 49
Nominal GDP: $60.0 billion (3.4% of total GDP)
Exports: $88 billion
Top Commodity Exports: 1. Gold ($17.7 billion) 2. Iron and Steel ($12.1 billion) 3. Aluminum ($6.8 billion) 4. Copper ($6.1 billion) 5. Potash ($5.8 billion)
Top Three Commodities (by Production Value): 1. Potash ($6.1 billion) 2. Gold ($5.9 billion) 3. Iron Ore ($5.3 billion)
$89.9 M
$0.5 B
Top 3: 1. Copper 2. Gold 3. Silver
3
$90.0 M
$1.7B
Top 3: 1. Diamonds 2. Tungsten 3. Stone
4
$0.6 B
Top 3: 1. Gold 2. Silver 3. Sand and Gravel
$270.2 M
1
$7.0 B
$500.1 M
Top 3: 1. Coal 2. Copper 3. Gold
37
4
$2.4 B
$20.2 M
Top 3: 1. Coal 2. Sand and Gravel 3. Sulphur elemental
25
2
$7.2 B
$211.5 M
Top 3: 1. Potash 2. Uranium 3. Coal
21
1
$1.3 B
$57.7 M
Top 3: 1. Nickel 2. Gold 3. Copper
11
2
$9.8 B
$600.2 M
Top 3: 1. Gold 2. Copper 3. Nickel
49
18
$8.2 B
$327.9 M
Top 3: 1. Iron Ore 2. Gold 3. Titanium Dioxide
32
21
$4.0 B
$104.0 M
11
Top 3: 1. Iron Ore 2. Nickel 3. Copper
P.E.I.
$3.7 M
Top 3: 1. Peat 2. Sand and Gravel 3. Stone
New Brunswick
$0.7 B
$28.4 M
Top 3: 1. Potash 2. Zinc 3. Peat
1
6
Nova Scotia
$0.2 B
$12.0 M
Top 3: 1. Stone 2. Salt 3. Sand and Gravel
11

Data were current as of August 13, 2014.

Sources: Developed by the Minerals and Metals Sector of Natural Resources Canada (NRCan); Statistics Canada

Note 1: GDP data consist of mining (except oil and gas), Support Activities for Mining, nonmetallic mineral product manufacturing, primary metal manufacturing, and fabricated metal product manufacturing (NAICS 212+21311B+327+331+332). Employment data consist of mining (except oil and gas), support activities for mining, nonmetallic mineral product manufacturing, primary metal manufacturing, and fabricated metal product manufacturing (NAICS 212+21311B+327+331+332). Export values are for domestic exports, which consist of the exports of all goods grown, produced, extracted, or manufactured in Canada leaving the country for a foreign destination. For a map of producing mines and smelters across Canada, see geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/0?path=geoscan.downloade.fil&id=fastlink&pass=&format=FLDOWNLOADE&search=R=292216. Employment data are derived from Statistics Canada Table 383-0031: Labour statistics consistent with the System of National Accounts (SNA), by province and territory, job category and North American Industry Classification System (NAICS)

Note 2: Cement is excluded from the top three commodities as it is a manufactured product.

Looking ahead, the future holds numerous potential resource development opportunities across Canada. NRCan estimates that there is approximately $165 billion in investment in major mining projects currently under way or planned over the next 10 years across Canada.

Its vast endowment of mineral resources provides Canada with immense possibilities to meet growing global demand and to expand its international standing as a major producer of natural resources in the years to come. Emerging economies, population growth, security of supply concerns, and supply disruptions will continue to elevate the importance of mineral resources as the largest economies seek to secure upstream access and a reliable supply. Canada is therefore facing an important opportunity to further transform its natural resource wealth into long-lasting prosperity for all Canadians.

However, throughout the mineral development sequence, different environmental, social, and economic concerns and issues exist. Mineral exploration, extraction, and processing necessarily have varying environmental footprints and impacts on a territory and its ecosystem. In addition, mineral development can have social impacts such as increasing inflation in local housing and land markets, adding pressure on local and social infrastructure and services, adversely affecting a community's social cohesion because of wealth discrepancies, and exacerbating social problems (e.g. crime and substance abuse).[18]

Enhancing Local Benefits Through Community Engagement and Readiness

For communities to prosper from mineral resource development, they need to be engaged and viewed as partners in the resource development process with an understanding that resource development opportunities have the potential to unlock significant socio-economic benefits, including:

- Well-paid employment;
- Training for regional residents linked to direct participation in the resource development project or indirect participation through supplying or retailing industries connected to the project;
- Increased entrepreneurship among regional businesses and residents;
- Improvements in regional economic and social infrastructure such as major highways, schools, housing, and sanitation facilities; and
- Increased economic and social stability, and improved self-sufficiency of local communities.

Community engagement must happen at the local level between community members and with industry and various levels of government. Meaningful community engagement is a critical element to improving community readiness, which is the ability of communities to be prepared to take full advantage of resource development opportunities in their proximity. Communities that better understand the full scope of proposed developments, including the impacts on land use and risks and benefits, are better prepared to develop and execute plans that prepare community members for economic development, employment opportunities, and an influx of wealth into their communities (see Box 1).[19]

18 Natural Resources Canada, *The Social Dimension of Sustainable Development and the Mining Industry*, nrcan.gc.ca/mining-materials/policy/sustainable-development/social-dimension/8748.

19 Canada West Foundation, *From the Ground Up. Earning Public Support for Resource Development*; cwf.ca/pdf-docs/publications/From%20the%20Ground%20Up%20Report%20v7.pdf.

Box 1: Mining Information Products for Aboriginal Communities

NRCan has produced a set of information products[20] to increase the ability of Aboriginal peoples to understand the mineral development sequence and participate in exploration and mining-related activities.

Based on recommendations from a national survey of Aboriginal communities near mining projects, NRCan, in partnership with Aboriginal Affairs and Northern Development Canada (AANDC), the Prospectors and Developers Association of Canada (PDAC), The Mining Association of Canada (MAC), and the Canadian Aboriginal Minerals Association (CAMA), developed the *Mining Information Kit for Aboriginal Communities*. Published in 2006, the objective of the Kit was to strengthen Aboriginal peoples' capacity to better understand mineral development and to take advantage of the opportunities that mining can bring to their communities. The Kit was designed to explain the mineral development sequence, identify the main activities and players, and outline opportunities for Aboriginal communities to get involved. Each module corresponds to a stage of the mineral development sequence and includes a case study to illustrate positive community experiences. In 2013, the *Mining Information Kit for Aboriginal Communities* was reviewed and updated with user feedback and through a process involving a multistakeholder advisory committee. It was published under the new title *Exploration and Mining Guide for Aboriginal Communities*.

In 2014, a *Trainer's Manual for the Exploration and Mining Guide for Aboriginal Communities* was published. The need for such a manual was identified as an additional resource for more effective delivery of information on the mineral development sequence and related economic opportunities to Aboriginal peoples. The manual was designed to help a trainer deliver mining information sessions using the *Exploration and Mining Guide for Aboriginal Communities*. It was prepared in consultation with the original partners of the *Exploration and Mining Guide* and informed by the input and recommendations received during pilot workshops held in 2013 in Quebec, Saskatchewan, and British Columbia in partnership with the Council for the Advancement of Native Development Officers (Cando). Along with information about the mineral development sequence, the workshops provided information and tools that economic development officers and other community members may use for developing a mining industry participation strategy.

In addition, NRCan developed an informative video explaining the mineral development sequence (*Our Community . . . Our Future: Mining and Aboriginal Communities*), a series of fact sheets on partnership agreements in Canada, and an on-line interactive Map of Aboriginal Mining Agreements. Together these information products provide a wide range of stakeholders and communities with ready access to information pertaining to the mineral development sequence, exploration and mining projects, Aboriginal communities, and agreements.

20 To view the mining information products, visit nrcan.gc.ca/mining-materials/aboriginal/bulletin/7817.

In addition to community engagement, many other factors can have an impact on a community's readiness for mineral development, including but not limited to:

- **Health and well-being:** Existing socio-economic conditions can prevent communities from being able to take advantage of the opportunities that accompany mining-related activities. For instance, problems of inadequate housing and overcrowding, unsafe water supplies, poor nutrition, family violence, and drug and alcohol abuse all diminish a community's ability to engage successfully in economic development.
- **Education, skills and training:** While literacy and essential skills are necessary to ensure a foundation upon which to build additional skills, labour demand in the minerals and metals sector often requires workers with at least a grade 12 education and specific skill sets that must be developed from post-graduate education or training of a more advanced nature.
- **Access to information and expertise:** Integral to community readiness is a community's ability to make informed decisions related to proposed development projects. With increased levels of engagement by private industry and various levels of government, communities may require additional support to participate in these processes, including access to information and expertise that will help them understand the impacts of developments and to inform their community. A lack of information and technical expertise can delay or prevent some communities from seizing opportunities resulting from nearby mineral resource projects, and can also impede some communities from pursuing partnerships with industry proponents.
- **Physical infrastructure:** The state of a community's physical infrastructure is a key factor in determining whether it can attract mineral resource development and benefit from it. However, Canada's mineral resources are often located in remote, harsh environments that lack supporting infrastructure such as power lines, road access, airports, pipelines, railways, and ports.
- **Financial and business literacy:** Mining-related activities can cause a significant increase in a community's commercial activities and revenues that will demand financial and business expertise. In order to fully benefit from mining development, a community must be able to interpret financial statements, balance the books, build strategic business plans, and be prepared to evaluate complex risks and business management functions.
- **Access to capital and business partnerships:** Mineral development provides significant opportunities for business development. However, business development requires financing to get under way. For prospective and existing entrepreneurs in small communities looking to take advantage of nearby mineral development, finding the capital to start or grow a business can be challenging. Similarly, given the scale of mining projects, most small communities do not have the financial means to acquire an equity participation in the projects.

II. Good Practices Throughout the Mineral Development Sequence

Across Canada, there are various examples of initiatives and projects that can be considered good practices in community engagement and readiness or for which good practices were applied. This section comprises 22 case studies that highlight good practices that have been implemented by governments, industry, and communities across Canada. They span the mineral development sequence from the execution of geo-mapping to exploration, mine development, and production, all the way to mine closure and the reclamation of depleted mine sites.

Various types of case studies were provided by federal government departments, provincial and territorial governments, and members of the EAC. The case studies look at the following:

- Government initiatives designed to improve engagement and/or enhance community readiness;
- Specific exploration or mining projects and the steps taken to engage local communities and stakeholders;
- Negotiated agreements involving communities, governments, and industry; and
- Community-driven initiatives pertaining to exploration and mining companies.

Good practices and lessons learned have emerged from a review of the case studies that were compiled. Some are specific to certain phases of the mineral development sequence while others apply to its entirety. All of them illustrate the importance of close collaboration, respect, and trust as necessary building blocks in facilitating responsible mineral development that enhances benefits for local communities.

Here is a summary of the good practices occurring at various stages of the mineral development sequence that may be drawn from the case studies:

Pre-exploration

- Community-based guides help set general guidelines for engagement between local communities and resource development companies looking to work on their territory. They improve the readiness of local communities heading into negotiations and allow companies to clearly understand what is needed for projects to proceed. See the case study on page 26.
- Knowledge shared between governments and communities during engagement activities for the geo-mapping of a territory may help address some of the future information needs of communities. See the case studies on pages 20, 22, and 24.
- Communication plans and products aimed at communities are critical to inform of upcoming activities.[21] See the case studies on pages 20 and 24.

21 A communication plan is recommended throughout the mineral development sequence.

Exploration

- In British Columbia, a multi-year, regional-based approach to permitting has proved to be an effective measure in reducing repetitive community consultation and referrals for the same exploration project. It helps avoid "consultation fatigue" and diminishes pressures on limited community resources that have to respond to consultation for numerous applications in the same permitted area. See the case study on page 37.
- Having an exploration agreement in place establishes a strong foundation and provides reassurance to local communities that the company is committed to working closely with them throughout the entire exploration project. See the case study on page 35.

Development

- Governments and communities have to plan for the social and environmental requirements and anticipate the oversight needed because of the rapid population and economic growth that comes with mining operations. This may include intensified health services, local infrastructure, housing, security and policing, and educational and medical services. A collaborative regional approach involving representatives from governments, communities, and industry helps provide a better understanding of the type and scale of issues created by regional growth. See the case study on page 49.
- Resource companies that engage communities early and arrive at an early-stage agreement prior to a government permitting review could avoid possible delays in the review process. See the case studies on pages 43, 45, 47 and 51.
- Delivering training programs in partnership with industry, communities, and educational institutions is the key to high employment success rates for program graduates. A collaborative model of training that includes methods/components that are culturally relevant, delivered in the local communities or at the mine sites, is also important for retaining students in the programs. See the case studies on pages 39, 41 and 53.
- Communities that are involved in a project are more likely to work toward its success. Therefore, entering into a formal agreement with a community affected by a project helps provide a competitive advantage to a company by limiting disruptions, reassuring investors and NGOs, and accessing local labour and knowledge. See case studies on pages 45 and 47.

Operation

- Ensuring that communities have regular, formal means to express their concerns and provide input into decisions by companies and regulators helps build trust. See the case studies on pages 55 and 63.
- Incorporating accountability measures (i.e. measurement and reporting on progress) into agreements helps ensure that communities fully benefit from mining-related activities. See the case studies on pages 55 and 63.
- Similarly, monitoring industry's achievements and communicating successes to the public helps with building and maintaining trust and confidence with communities. See the case study on page 55.

Closure and Post-closure

- Land reclamation provides an opportunity for collaboration among governments, industry, communities, Aboriginal groups, and the public to explore opportunities to develop an integrated land management approach to end-of-life land-use planning. See the case studies on pages 57, 59 and 61.
- The restoration of orphaned and abandoned exploration and mine sites provides an opportunity for partnerships between governments, communities, and industry. In addition to positive environmental impacts, these projects provide jobs and skills for local communities and demonstrate commitment to responsible development. See the case study on page 61.

At Every Step of the Mineral Development Sequence

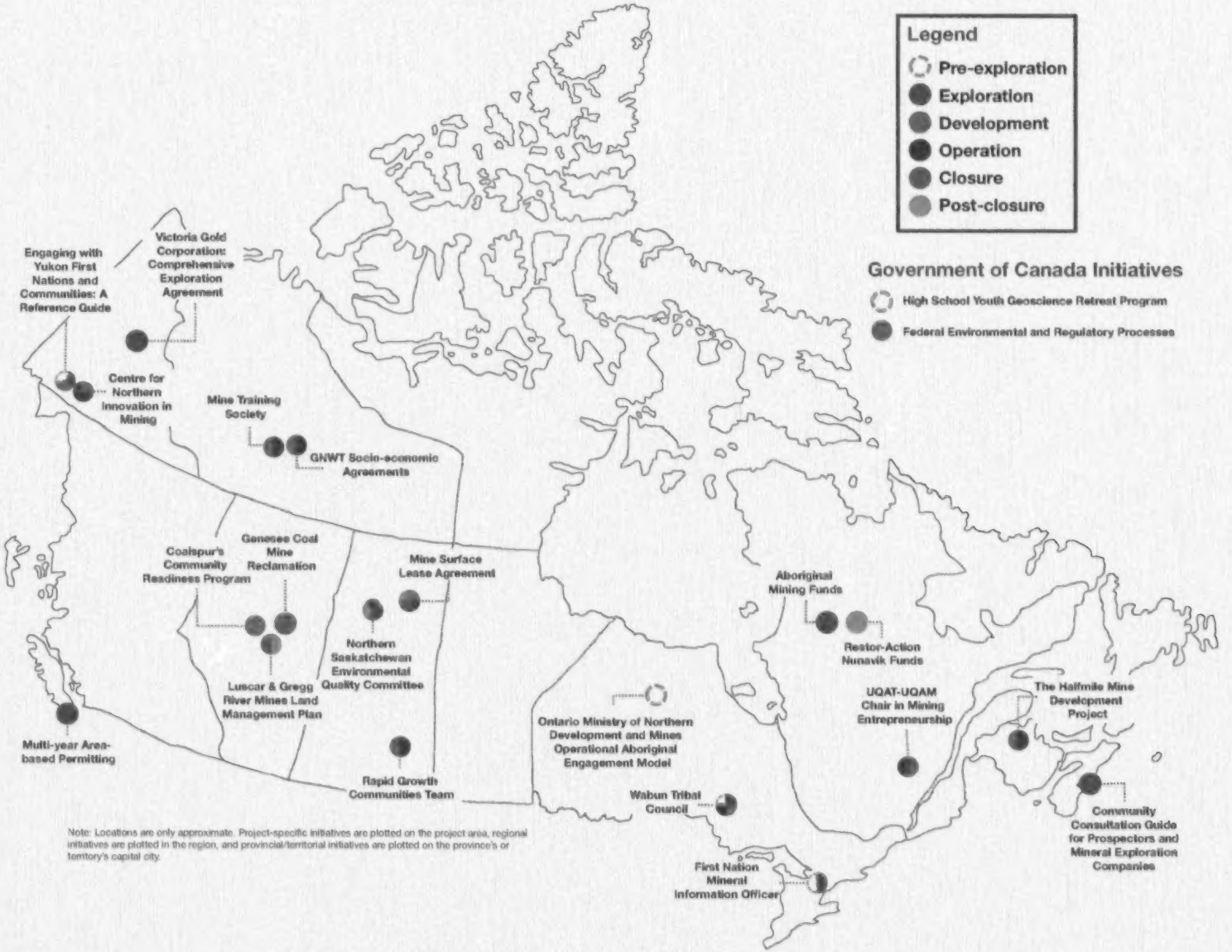
In addition, key findings applicable to the mineral development sequence that are drawn from the case studies include:

- Actively engaging with local communities at an early stage of a project is critical to signal the importance of the communities' views and well-being.
- Communication must be done in good faith with all parties, including those with opposing viewpoints, to ensure their concerns are understood and considered. Similarly, managing communities' expectations is important.
- People involved in community engagement and relationship-building must have the appropriate skills and competencies, including cultural awareness and interest.
- It is necessary to ensure regular and culturally appropriate communication of any plans that might have an impact on a community's livelihood and rights.
- Developing a common long-term vision between project proponents, communities, and governments helps contribute to a project's success.
- Sustaining relationships with affected communities and other stakeholders throughout the life of a project's operations – not simply during the initial feasibility and assessment phase – improves risk management and will result in better outcomes.
- Engaging communities and stakeholders and implementing initiatives on a regional scale rather than only in the vicinity of projects creates an opportunity to better coordinate responses to address pressing issues.
- Supporting initiatives that bolster a community's capacities and opportunities contributes to an industry's success on a regional scale, beyond the immediate area of mining projects.
- Independent environmental monitoring agencies create a vehicle for community participation during the life of the project and build trust.

Table 3: Case Studies at Each Step of the Mineral Development Sequence

	Pre-exploration	Exploration	Development	Operation	Closure	Post-closure
Ontario Ministry of Northern Development and Mines' Operational Aboriginal Engagement Model (Ont.)	√					
High School Youth Geoscience Retreat Program of NRCan's Geo-Mapping for Energy and Minerals (GoC)	√					
Resident Geologist Program's First Nation Mineral Information Officer (Ont.)	√	√				
Engaging with First Nations and Communities: A Reference Guide (Yukon)	√	√	√			
Wabun Tribal Council (Ont.)	√	√	√	√		
Aboriginal Mining Funds (Que.)		√				
A Community Consultation Guide for Prospectors and Mineral Exploration Companies Working in Nova Scotia (N.S.)		√				
Victoria Gold Corporation: Comprehensive Exploration Agreement (Yukon)		√				
Multi-year Area-based Permitting (B.C.)		√				
UQAT-UQAM Chair in Mining Entrepreneurship (Que.)		√	√	√		
Yukon College: Centre for Northern Innovation in Mining (Yukon)		√	√	√		
Coalspur Mines Limited's Community Readiness Program (Alta.)			√			
Federal Environmental and Regulatory Processes for Stornoway Diamond Corporation's Renard Diamond Mine Project (GoC)			√			
Government of the Northwest Territories Socio-economic Agreements (N.W.T.)			√	√		
Rapid Growth Communities Team (Sask.)			√	√		
Halfmile Mine Development Project (N.B.)			√	√		
Mine Training Society (N.W.T.)			√	√		
Mine Surface Lease Agreements (Sask.)			√	√	√	√
Genesee Coal Mine Reclamation (Alta.)					√	
Luscar and Gregg River Mines Land Management Plan (Alta.)					√	√
Restor-Action Nunavik Fund (Que.)						√
Northern Saskatchewan Environmental Quality Committee (Sask.)	√	√	√	√	√	√

Figure 5: Case Studies Highlighting Good Practices in Community Engagement and Readiness Across Canada


Legend
Pre-exploration
Exploration
Development
Operation
Closure
Post-closure
Government of Canada Initiatives
High School Youth Geoscience Retreat Program
Federal Environmental and Regulatory Processes
Engaging with Yukon First Nations and Communities: A Reference Guide
Victoria Gold Corporation: Comprehensive Exploration Agreement
Centre for Northern Innovation in Mining
Mine Training Society
GNWT Socio-economic Agreements
Coalspur's Community Readiness Program
Genesee Coal Mine Reclamation
Mine Surface Lease Agreement
Northern Saskatchewan Environmental Quality Committee
Luscar & Gregg River Mines Land Management Plan
Multi-year Area-based Permitting
Rapid Growth Communities Team
Aboriginal Mining Funds
Rester-Action Nunavik Funds
Ontario Ministry of Northern Development and Mines Operational Aboriginal Engagement Model
UQAT-UQAM Chair in Mining Entrepreneurship
The Halfmile Mine Development Project
Community Consultation Guide for Prospectors and Mineral Exploration Companies
Wabun Tribal Council
First Nation Mineral Information Officer

Note: Locations are only approximate. Project-specific initiatives are plotted on the project area, regional initiatives are plotted in the region, and provincial/territorial initiatives are plotted on the province's or territory's capital city.

Ontario Ministry of Northern Development and Mines' Operational Aboriginal Engagement Model

Context

The Ontario Ministry of Northern Development and Mines' (MNDM) Ontario Geological Survey (OGS) initially developed an Aboriginal engagement model in 2000 in response to changing Aboriginal expectations related to engagement and involvement in government geological survey activities. The model has since been adopted broadly across other operational units within MNDM.

Lead: Government (Ont.)

Step of the Mineral Development Sequence: Pre-exploration

Key Finding: The operational Aboriginal engagement model can be considered a good practice in community engagement as it establishes a deep mutual respect between Aboriginal and non-Aboriginal players.

The model was developed jointly by the OGS and Aboriginal participants following a conflict faced by the OGS in 1999 related to the delivery of geological mapping projects.

Description of Measures Implemented

The OGS engagement model is designed to meet the different types of engagement required to reach different groups of people in an Aboriginal community: a) Chief to Chief; b) technical to technical; and c) community to community. The model therefore takes the following into account:

- A multi-year OGS geoscience mapping presence in a region where a longer-term relationship with multiple levels of an Aboriginal community is required (one or more Aboriginal communities may be involved);
- The importance of mutual discovery, engagement, relationship-building, information-sharing, collaboration, and consultation;
- Current legal, technical, and operational requirements;
- The goal of achieving a social licence as a result of the investment in relationship-building and collaboration; and
- The changing levels of OGS management and technical involvement through the project life cycle.

The model was communicated to MNDM by Aboriginal leaders. It is founded on discovery of mutual interests, jointly planned and delivered information and communication activities, long-term community engagement at the three above-mentioned levels, and involvement in science programming in the community school, all based on band direction. Activities may include: a) open houses; b) creation of language glossaries; c) field trips; d) classroom events in the school; e) sponsorship at geoscience and mineral sector meetings, such as the PDAC annual convention or local geoscience symposia and school events; f) radio and cable TV shows; g) science-focused articles in regional Aboriginal newspapers; h) collaboration with local colleges to design and deliver training requested by Aboriginal people; i) funding of traditional ecological mapping projects at a community level; and j) creation of information videos that have a high degree of Aboriginal control. The model is completely flexible in terms of implementation activities as long as the activity meets a band interest and falls within the mandate of the OGS. For interests that lie outside of MNDM, efforts are made to bring the responsible authority into the consultation process.

The model is not intended to address the delivery of information or consultation related to mineral sector activities and development in a region, although the geoscience knowledge shared during the implementation of the engagement model may help address many of the community information needs. The model is designed to meet the mandated function of government-delivered geological survey activities that may take place over a time frame of 1 to 10 years in proximity to a single Aboriginal community.

Results

The MNDM engagement and relationship-building model has resulted in the following:

- Separate memoranda of cooperation with four First Nation bands (the first was signed by a Deputy Minister and the last three were signed by the MNDM Minister);
- Deep mutual relationships established with many people in several First Nation communities;
- Reportedly, a "softer, more human side of Government" has been learned and demonstrated, helping to lay a foundation for many difficult discussions on topics that lie outside an operational mandate (e.g. interpretation of treaties and jurisdictional authority);
- Social licence to deliver technical projects in a collaborative way;
- Deep mutual respect between the key Aboriginal and non-Aboriginal players; and
- More than 200 individuals trained in the art and science of line cutting, some of whom went on to work in the mineral industry.

Lessons Learned

Several key lessons were learned:

a) Engagement and relationship-building are an investment, not a cost;
b) Patience and a long-term commitment are required;
c) It is about the relationship, which takes time;
d) Engagement at a community level is essential;
e) Projects that do not have band support (i.e. social licence) are at risk;
f) The relationship is developed between people, not organizations;
g) It is important to maintain consistency in the "face" of the organization over time;
h) People involved in engagement and relationship-building must have the appropriate skills and competencies, including a cultural awareness and interest; and
i) Support by Ministry executive is a critical success factor.

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High School Youth Geoscience Retreat Program of Natural Resources Canada's Geo-Mapping for Energy and Minerals

Context

Two youth geoscience retreats were held at NRCan's Geo-Mapping for Energy and Minerals Program (GEM) Cumberland Peninsula (Nunavut) geoscience camp in 2010 to offer northern youth the opportunity to visit a remote science camp and participate in an educational geoscience-based retreat. A series of interesting and educational workshops exposed the students to research taking place on Baffin Island and to career opportunities associated with northern research activities.

Pre-exploration | Exploration | Development | Operation | Closure | Post-closure

Lead: Government (GoC)

Step of the Mineral Development Sequence: Pre-exploration

Key Finding: GEM's Youth Geoscience Retreat program is a good practice in community engagement and readiness as it helps build trust and confidence with community members early on in the mineral development sequence and provides local youth with a glimpse of the career opportunities related to the minerals and metals sector.

Two groups of students were brought by helicopter to the GEM geoscience camp at the head of Paddle Fiord, located about 75 kilometres (km) south of Qikiqtarjuaq and about 100 km east of Pangnirtung.

Description of Measures Implemented

The students participated in several educational programs, including:

- An introductory course on rocks and minerals;
- A two-hour field trip with geologists;
- An introduction to global positioning systems (GPS) through a geocaching[22] scavenger hunt;
- Kimberlite indicator minerals and gold prospecting;
- A trip to a traditional hunting ground near Ikirashajuit;
- Food preparation; and
- Camp design and maintenance.

Students' involvement in an operational research field camp gave them exposure to numerous career paths through interactions with geologists, a helicopter pilot, an engineer, a camp manager, a professional chef and his assistant, wildlife monitors, a geographic information system specialist, a youth worker, and an administrative assistant with Aboriginal Affairs and Northern Development Canada.

Results

High-school students were introduced to what government geologists do when working in the field through hands-on experience in their own territory. They learned what geology is and what it may mean for their community. Participants also saw that a career in geoscience or related fields was an attainable goal for them.

22 Geocaching is a real-world, outdoor treasure-hunting game using GPS-enabled devices. Participants navigate to a specific set of GPS coordinates and then attempt to find the geocache (container) hidden at that location (Source: geocaching.com).

The program was a success in that northern youth were given an opportunity to be part of northern research activities. Participants were rewarded with an adventurous, inspirational, educational, and recreational program whose objectives were achieved in a safe and fun environment. The participants gained positive insight into opportunities open to them in the North.

Lessons Learned

It is important to engage with every generation of a community, including the youth. GEM's Youth Geoscience Retreat program is a good practice in community engagement and readiness as it helps build trust and confidence with community members early on in the mineral development sequence (i.e. the pre-exploration phase) and provides local youth with a glimpse of the career opportunities available in the minerals and metals sector.

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Resident Geologist Program's First Nation Mineral Information Officer

Context

The Government of Ontario maintains two First Nation Mineral Information Officers (FNMIOs) within the Ontario Geological Survey's Resident Geologist Program. The FNMIO's role is to promote a cooperative working relationship between government, the minerals and metals sector, and Aboriginal communities in Ontario by providing information and technical advice concerning mineral exploration activities, practices, procedures, and economic/job opportunities.

Pre-exploration | Exploration | Development | Operation | Closure | Post-closure

Lead: Government (Ont.)

Steps of the Mineral Development Sequence: Pre-exploration, exploration

Key Finding: The information and training provided by the FNMIO assists in increasing the capacity of Aboriginal communities to understand and participate in the minerals and metals sector without the participants having to leave their communities. As a result, communities are better prepared to benefit from mineral exploration developments that may occur in their proximity.

The program has been in place since the early 2000s. The goal at its inception was to increase the level of Aboriginal peoples' participation in the minerals and metals sector. The program focuses on two elements of the earliest stages of the mineral development sequence: prospecting and claim staking.

Description of Measures Implemented

The FNMIOs engage with Aboriginal communities across the province by delivering free and informative community-based courses, such as Introduction to Prospecting. The basic course is three days long and can be customized to meet the needs or wishes of the community. Additionally, the FNMIO provides educational instruction on basic rock and mineral identification techniques, on-site advice on prospecting methods, prospecting and mineral sector information to school children in classroom settings, and career fair support.

An FNMIO visit to a community can be initiated either by the community itself or through proactive outreach by the FNMIOs. The FNMIOs attend Canadian Aboriginal Minerals Association events, conventions, and planning meetings; actively network; and take advantage of all available opportunities to acquaint communities with the program.

Mining companies are also aware of the project and are partners in marketing the program to communities they are engaging with.

Results

Since 2003, 123 courses/training sessions have been delivered to 1 038 participants in more than 65 Northern Ontario First Nation communities. The intention of the courses is not only to provide information, but also to develop a relationship with the participants and initiate a dialogue that would last beyond the course.

There are many positive results stemming from the work of the FNMIOs. One is that communities are developing a level of trust with the individual officers and are contacting them directly to ask questions. In addition, the program engages with a wide range of people in the community, including: school children, adults, people who are looking for new job opportunities at career fairs, and band administrators. Even if people taking the course do not become prospectors, their knowledge of the mining industry and the mineral development sequence is greatly enhanced. Moreover, the FNMIO provides the Government of Ontario's Ministry of Northern Development and Mines with valuable insights on the level of Aboriginal participation and community capacity related to the government's minerals and metals sector programs and initiatives.

Lessons Learned

One of the challenges of delivering the program is that there is a very small group of people who have the right skill sets to do this job, which necessarily requires knowledge and sensitivity to the cultural and social character of Aboriginal communities; an understanding of Aboriginal peoples' concerns; and the requisite technical knowledge of prospecting, claim staking, assessment procedures, and mineral exploration techniques and methods.

The information and training provided by the FNMIO assists in increasing the capacity of Aboriginal communities to understand and participate in the minerals and metals sector without the participants having to leave their communities. As a result, communities are better prepared to benefit from mineral exploration developments that may occur in their proximity.

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Engaging with Yukon First Nations and Communities: A Reference Guide

Leads: Government, industry, and community (Yukon)

Steps of the Mineral Development Sequence: Pre-exploration, exploration, development

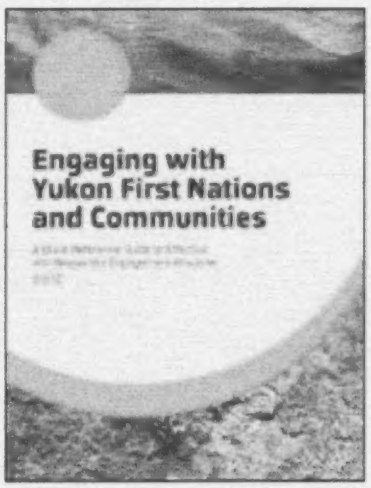
Key Finding: The resource guide on engaging with Yukon First Nations is a good practice in community engagement as it helps industry gain awareness of First Nation and community values, which are important elements to build mutually beneficial relationships.

Context

A resource entitled *Engaging with Yukon First Nations and Communities: A Quick Reference Guide to Effective and Respectful Engagement Practices* (2012) was developed in collaboration with the First Nation of Na-cho Nyak Dun, Tr'ondek Hwech'in First Nation, and the Yukon Chamber of Mines. This Yukon-specific guide was developed to help mining, exploration, and development companies doing business in Yukon to establish sound and respectful working relationships with Yukon First Nations and communities when undertaking mineral exploration or development.

The guide emphasizes the need for early, effective engagement with First Nations and communities during the planning stages and provides general direction on navigating through the unique Yukon environment in terms of the governance structure and regulatory environment.

In Yukon, there are 14 First Nations of which 11 have settled land claims and entered into self-government agreements that establish each as a legal entity with powers and responsibilities similar to those of a province. In addition, there are eight Yukon municipalities that are incorporated and have certain decision-making powers and responsibilities, and all communities that may be affected by a project will most likely have an interest in a company's activities.



Description of Measures Implemented

The guide is a 22-page handbook, written in plain language, that is easy to navigate through. It is intended as a reference only and does not provide details on how to engage every First Nation or community as each one is unique. Each First Nation in Yukon has its own expectations with regard to engagement and some, such as the Na-cho Nyak Dun First Nation, Champagne-Aishihik First Nation, and Tr'ondek Hwech'in First Nation, have protocols or guidelines developed outlining their specific requirements for industry.

Results

The guide is useful for industry looking to plan and build for long-term success; build mutually beneficial relationships; achieve permitting, regulatory, and scheduling success; gain awareness of First Nation and community values; access knowledge, expertise, employees, and suppliers; and foster mutually positive outcomes.

Lessons Learned

The resource guide on engaging with Yukon First Nations and communities has been well-received by the mining industry in Yukon. Important components within the guide are the descriptions of the unique Yukon environment, which include the regulatory, permitting, and land operating contexts and provide useful information about each First Nation in Yukon and resources related to Aboriginal engagement and applicable regulations. This guide serves as a good starting point for companies that are starting work in Yukon.

For more information:

Visit the Yukon Chamber of Mines Web site at yukonminers.ca or access the electronic document at yukonminers.ca/images/pdf/engaging_first_nations/QRG20121.pdf.

Wabun Tribal Council

Lead: Community (Ont.)

Steps of the Mineral Development Sequence:
Pre-exploration, exploration, development, operation

Key Finding: As a community-driven organization, the WTC has helped facilitate engagement with exploration and mining companies and enhanced community readiness by building capacity and maximizing local benefits from mineral resource development activities happening on its territory.

Context

The Wabun Tribal Council (WTC), a non-profit regional council established in 1989 and based in Timmins, Ontario, is the regional representative body for the First Nations of Brunswick House, Chapleau Ojibwe, Flying Post, Matachewan, Mattagami, and Beaverhouse. These communities are situated within the northeastern Ontario districts of Sudbury, Timiskaming, and Cochrane, all of which lie within the Nishnawbe-Aski Nation. The WTC's Board of Directors comprises the Chiefs of the six communities. The WTC has an Executive Director and staff that work in the fields of health, education, economic development, and resource development.

The WTC has played an important role in the development trajectory of the Wabun First Nations over the past decade, especially in the realm of mineral exploration and development. WTC staff are responsible for negotiating mining development agreements in collaboration with community leaders and acting as a point of contact for project proponents and as a liaison in communications between government, industry, and the communities. The WTC also provides each member community with the support of the other member First Nations.

Description of Measures Implemented

The WTC started with the mapping of traditional territories in preparation for mining. Through the mapping process, the Chiefs established "economic boundaries," recognizing that traditional territories overlap, but that a basis for allocating revenues from Impact and Benefit Agreements (IBA) was needed. A map of individual community territories has been kept as an internal document, while a map of the collective territory has been made available to industry. This maintains the strength of the collective voice while also making the negotiation process easier for exploration and mining companies.

The map of economic boundaries includes buffer zones between different communities' territories. If a potential project is to take place in a buffer zone, the bordering communities commit to negotiate together and work toward a single IBA. The discussions and decisions between communities take place before any negotiations begin with the project proponent, allowing communities to agree upon their own plans for sharing before negotiating with industry, benefiting both the First Nations and the industry proponent.

Furthermore, the WTC has developed a standard Exploration Agreement (EA) that all exploration firms are expected to sign before exploring on its territory. This standard EA allows an agreement to be negotiated in less than a day. However, if the land in question requires unique kinds of protection or if the nature of the exploration activities elicits unique community concerns, the agreement can be modified and the negotiation process extended. The agreement includes a number of important elements, such as the allocation of economic benefits, requirements for consultation and engagement, considerations regarding cultural activities, a successor clause that requires the EA to be transferred to the new company if claims are sold, and a commitment to engage in and fund IBA negotiations if the exploration project develops into a mine project.

The WTC also works to maintain discipline within the community leadership. Once negotiations begin, it is made clear to all involved that the company is to communicate only with the members of the negotiation team and is not to directly contact anyone from the community. If anyone is contacted by the company, they know to redirect the company to the negotiation team.

Implementation can be the most challenging part of an agreement. The WTC has addressed this challenge by ensuring that there is a First Nations IBA Coordinator and an IBA committee for each IBA. The IBA Coordinators spend the majority of their time at the mine sites communicating with workers and managers, overseeing activities, and ensuring that the terms of the IBA are being met.

Results

As a community-driven organization, the WTC has helped facilitate engagement with exploration and mining companies and enhanced community readiness by building capacity and maximizing local benefits from mineral resource development activities happening on its territory. Collectively, the Wabun First Nations have signed over 20 EAs and the WTC has negotiated three IBAs, two of which include more than one First Nation. Although the first IBA was signed just over five years ago, community members are already experiencing the positive impacts, such as increased employment, business opportunities, training, and improvements in community well-being. One of the more subtle benefits connected with the Wabun First Nations engagement with the mining industry is the strengthening of social capital. Through their collective work on mining, those involved in the WTC have helped create linkages between communities and, in doing so, increased the strength and resilience of each individual community. The WTC has also been instrumental in the sharing of important information and ideas among communities and in the development of meaningful relationships.

Lessons Learned

The WTC has identified several key factors that have helped it engage with governments and industry to harness benefits from mineral development in a way that is consistent with its desire to pursue economic development while strengthening culture, investing in education, and promoting community well-being. These factors are the expertise and perseverance of WTC staff, a focus on pre-negotiation planning and preparation, the streamlining of processes where possible, a commitment to identifying and addressing challenges, and a commitment to open dialogue and sharing as enabled by trust amongst the WTC members.

For more information:

Visit the Wabun Tribal Council's Web site at wabun.on.ca.

Aboriginal Mining Funds

Context

Leads: Government and community (Que.)

Step of the Mineral Development Sequence: Exploration

Key Finding: The Aboriginal Mining Funds have improved the readiness of local communities through capacity building, information sharing, and improving business linkages with the mining industry.

The development of the mining industry must be done responsibly and must involve Aboriginal communities. This commitment poses a number of challenges, in particular, gaining a better understanding of the mining industry, entrepreneurship, and development of the labour force.

In 1997, the Government of Quebec established the Aboriginal Mining Funds to encourage Aboriginal communities in Quebec's James Bay and Far North regions to become involved in the development of mineral resources in these regions.

This initiative has been instrumental in increasing the involvement of Aboriginal communities in the development of mineral resources and addresses five major objectives:

- Develop mining exploration in the territories that are relatively underexplored with a view to responsible development;
- Develop a high level of expertise in the Aboriginal communities that will lead to job creation;
- Bring awareness to the local communities and inform them about the exploration and development activities that are currently under way in the region;
- Encourage the creation of Aboriginal-owned businesses that are capable of operating in the mineral resources sector; and
- Promote communications and business ties between Aboriginal communities and mineral exploration companies.

Description of Measures Implemented

Two Aboriginal funds were created in northern Quebec:

- The Cree Mineral Exploration Board (CMEB) was created as the result of an agreement on a new relationship between the Government of Quebec and the Cree of Quebec, signed on February 7, 2002. The CMEB was created in March 2002 under an agreement between the Quebec Ministry of Energy and Natural Resources (MENR) and the Cree Regional Government. From 2002 to 2012, the MENR provided $3.6 million in funding for the CMEB. The contribution from the Cree Regional Government for this same period was approximately $2.5 million.

Source: Cree Mineral Exploration Board

- The Nunavik Mineral Exploration Fund (NMEF) was created in 1998 as the result of an agreement between the MENR, the Kativik Regional Government, and the Kativik Regional Board of Development. Since 1998, the MENR has provided $4.84 million in funding for NMEF's activities. The Kativik Regional Government's contribution for this same period was $813,000.

The Government of Quebec's participation and encouragement are continuing with a $300,000 contribution per year for both funds.

Results

The activities undertaken by the Aboriginal Mining Funds can be summarized as follows:

1. Awareness and advocacy activities that encourage community members to become more involved in mining development: From 2001 to 2013, the CMEB and the NMEF have participated in 38 and 41 activities, respectively, at the regional and provincial levels.
2. Training activities leading to the title of prospector, which helps foster a skilled labour force and an expertise leading to job creation within Aboriginal communities: From 2001 to 2013, the CMEB and the NMEF executed 15 and 26 training activities, respectively. The training usually lasts for a period of one to six weeks. Approximately 230 people have participated in these activities.
3. Support for exploration that encourages the autonomy of prospectors in targeted communities and develops exploration in unexplored territories: From 2001 to 2013, the CMEB and the NMEF have supported 23 and 25 exploration projects, respectively.
4. The realization of mineral exploration projects that promote the integration of targeted communities into various projects being conducted in the areas concerned and develop mineral exploration in underexplored territories: From 2001 to 2013, the CMEB and the NMEF have independently carried out 2 and 19 projects, respectively. In addition, the CMEB has supported 34 projects and the NMEF has realized 8 projects in partnership with exploration companies.
5. Business creation: From 2001 to 2014, the CMEB has helped foster the creation of 5 exploration companies, 5 prospecting companies, and 12 services companies, while the NMEF has helped foster the creation of 2 exploration companies and 7 service companies. The involvement of the funds promotes the emergence of entrepreneurship in targeted communities and the creation of Aboriginal businesses working in the field of mineral resources.

Lessons Learned

In general, the mineral exploration funds have improved the readiness of the local communities in the following ways:

- Raised awareness and encouraged the participation of Aboriginal communities in the mining industry;
- Introduced Aboriginal youth to the reality of mining exploration and operations;
- Encouraged the development of ties between mining companies and Aboriginal communities;
- Fostered the creation of Aboriginal-owned businesses; and
- Contributed to the development of the mineral potential of northern territories.

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Cree Mineral Exploration Board
cmeb.org

Nunavik Mineral Exploration Fund
nunavikmineralexplorationfund.com

A Community Consultation Guide for Prospectors and Mineral Exploration Companies Working in Nova Scotia

Context

Access to lands and capital for mineral exploration is increasingly tied to community acceptance and participation. Therefore, Nova Scotia is asking prospectors and mineral exploration companies to strengthen their community consultation process by adopting a voluntary good practices approach.

Pre-exploration | **Exploration** | Development | Operation | Closure | Post-closure

Leads: Government, industry, and environmental non-government organizations (N.S.)

Step of the Mineral Development Sequence: Exploration

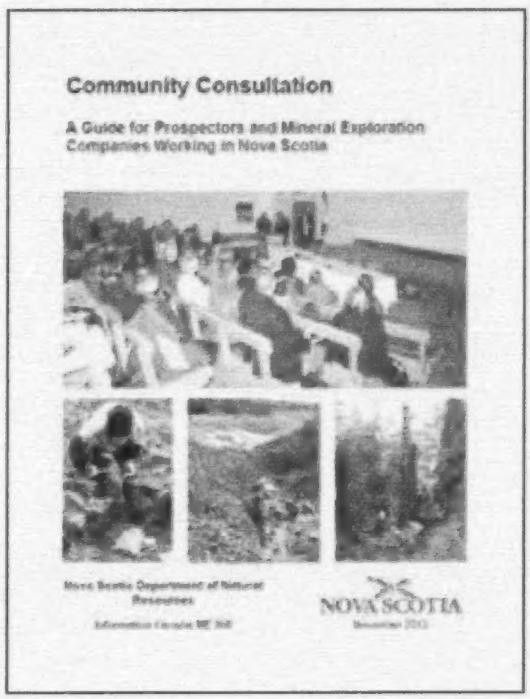
Key Finding: Creating a jurisdiction-specific guide for good practices around community consultation is an important first step in helping to improve community engagement and community readiness for mineral resource development.

Description of Measures Implemented

The Mineral Resources Branch (MRB) of the Nova Scotia Department of Natural Resources (NSDNR), the Ecology Action Centre, the Mining Association of Nova Scotia, and the Sierra Club of Canada have jointly created a community consultation guide for prospectors and mineral exploration companies. The guide provides a succinct review of when and how companies should engage with individuals and communities. The degree and nature of the consultation required are linked to the potential impact that various types of exploration activities could have on a community.

Results

The release of the guide in September 2013 has helped increase awareness of the need to improve community consultation. However, this has not yet led to widespread adherence to the good practices contained in the guide. Workshops and presentations are being provided to strengthen the capacity of prospectors and exploration companies to undertake community consultation.


Community Consultation
A Guide for Prospectors and Mineral Exploration Companies Working in Nova Scotia
NOVA SCOTIA

Lessons Learned

The collaborative process used to create the guide greatly improved trust and communication between government, environmental non-government organizations (ENGO), and the mineral industry. This increased trust has led to high participation rates by industry in government and ENGO-led workshops focusing on community engagement.

Creating a jurisdiction-specific guide for good practices related to community consultation is an important first step in helping to improve community engagement and readiness for mineral resource development.

For more information:

Government of Nova Scotia's Community Consultation Guide
novascotia.ca/natr/meb/data/pubs/ic/ic68.pdf

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Victoria Gold Corporation (VIT): Comprehensive Exploration Agreement (CEA)

Context

Lead: Industry (Yukon)

Step of the Mineral Development Sequence: Exploration

Key Finding: Having an exploration agreement in place establishes a strong foundation and provides reassurance to local communities that the company is committed to working closely with them throughout the entire exploration project.

The Eagle gold project is situated on Victoria's Dublin Gulch property in the Mayo Mining District of central Yukon, Canada. The site is approximately 85 km north-northeast of the village of Mayo and is located within the traditional territory of the Na-cho Nyak Dun (NND) First Nation, with part of the project on Category B Lands.[23]

Victoria Gold Corporation (VIT) and the NND signed a Comprehensive Exploration Agreement (CEA) in September 2012 outlining the company's commitment to the NND beginning at the early exploration phase of the Eagle gold project, with the intent that the relationship would continue on until a resource has been identified. The agreement included funding for an NND Environmental Monitor and a Community Liaison on both the Category B project area and the Eagle gold project. A community celebration and official signing were held in Mayo, Yukon, to commemorate this historic event.

It is increasingly common for exploration companies to enter into an early-stage agreement with the First Nation(s) concerned in anticipation of the impacts and opportunities arising from exploration activities in the short term. Entering into a more comprehensive agreement prior to the identification of the resource is unique to the mineral exploration industry and it was viewed as a significant milestone for both VIT and the NND.

Throughout the negotiation of this comprehensive agreement, the company demonstrated its long-term commitment to working with the NND throughout the life cycle of the mining project and building a strong relationship from the start. If and when a resource is found, a Community Comprehensive Cooperation Benefits Agreement (CCBA) will be negotiated with the starting point already being established by the CEA.

Description of Measures Implemented

Having this CEA in place has established a strong foundation and provided reassurance to the NND that VIT will be committed to working closely with the community throughout the entire project and to developing a working relationship between the two parties regarding exploration related to the Eagle gold project and specifically on the NND Category B Lands.

23 Category B Settlement Land is a parcel of land where a Yukon First Nation has ownership of the surface.

One of the major challenges faced by both VIT and the NND was that they were negotiating for a mining project that may or may not exist in the future since no exploration had been done to confirm any resources.

For this reason, there was difficulty in defining how far to go with the agreement, recognizing that it would set a precedent for industry.

Results

The NND was pleased with the negotiation of the CEA, and the agreement was signed by the Chief and Council. The CEA applies to exploration activities carried out by VIT, its agents, or assigns on the exploration area until such time as a CCBA is executed by the parties or terminated as per the terms in the agreement. This agreement does not authorize any exploration activities on the NND settlement land other than the exploration area or constitute the NND's consent for VIT to undertake production activities within the exploration area. This agreement is therefore recognized to be strictly for exploration activities.

The agreement provides a base for further negotiations and gives certainty to the relationships on both sides if a mine is proposed. A harmonious working relationship developed from the start, and both sides clearly stipulated what their expectations were, minimizing the probability of future conflicts and relationship breakdowns. The agreement thus provides solid guidance to leadership if any changes are made within the company or First Nation, decreasing potential misperceptions about what will happen on either side as the project moves forward. As time passes and the situations change for either side, there may be opportunities for further negotiations.

Lessons Learned

VIT learned throughout this process, and it took the company a good deal of time to determine where it was going and how it could effectively build its relationship with the NND. Originally, the company had focused on the development of a standard exploration agreement and, had it known ahead of time where it would be going with the negotiations, a lot of time and resources could have been saved. With the detail that was addressed in the CEA at this stage, there were increased costs related to legal services and time spent preparing the agreement for signing.

During the negotiating process, the NND gained experience and a better understanding of the Eagle gold project, and VIT gained greater knowledge about working with the First Nation community.

VIT's CEA helps demonstrate that a more comprehensive and long-term vision of engaging with First Nations communities is beneficial for both the local community and the project proponent.

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Multi-Year Area-Based Permitting

Lead: Government (B.C.)

Step of the Mineral Development Sequence: Exploration

Key Finding: Multi-year area-based (MYAB) permitting can be considered as a good practice in community engagement as it helps avoid "consultation fatigue" and diminishes pressures on limited community resources that have to respond to referrals for numerous applications in the same permitted area.

Context

The British Columbia Ministry of Energy and Mines and Responsible for Core Reviews' Mines and Mineral Resources Division (MMRD) has historically issued permits on an annual basis for mineral and coal exploration projects to perform specific work on a site. In recent years, a need for increased flexibility has been recognized, and First Nations communities expressed concern regarding responding to referrals for numerous applications in the same permitted area. Thus, there has been a movement toward issuing multi-year area-based (MYAB) work approvals.

MYAB permitting is the practice of authorizing exploration activities, typically for up to five years, within identified activity area(s) underlain by the mineral or coal tenure area of the project. Proponents have the flexibility to execute exploration programs over the entire area of the authorization and over the life cycle of the authorization as field results and market conditions dictate. The MYAB Work Program Annual Update tracks consistency with the scope of the approved work program and indicates what portion of the remaining approval may be completed in the upcoming year.

This policy is not intended to place restrictions on the statutory decision-making power of inspectors. Discretion to decide whether or not an MYAB approach is acceptable remains with the inspector based on the nature of the proposed work, including the geographic or geologic conditions of the work area, their experience with the proponent, wildlife, or other values on the land base.

Before January 2013, MYAB permitting was being used in a number of mining-rich regions, but had not yet been properly formalized, communicated, and implemented to its full potential. There were a number of actions taken to help establish MYAB permitting as a more widely used approach to permitting.

Description of Measures Implemented

MYAB permitting was initially piloted out of the Smithers office in the northwest region of the province. As the approach proved to be effective in reducing the number of applications submitted on an annual basis, a broader province-wide policy was established to encourage industry to submit MYAB permit applications.

Between November 2012 and January 2013, the Ministry worked to improve understanding of the value of MYAB permitting and how to implement the policy effectively in each region. The policy was approved and formally implemented in January 2013.

Since the policy was introduced, the MMRD has worked with the Association for Mineral Exploration British Columbia to encourage the exploration industry to move towards MYAB permits.

Results

MYAB permitting promotes the concept of consultation with First Nations in a specific geographic area. This allows the consultation process to address interests in a larger area based on the possibility that a variety of work could occur in the area over a number of years. With the aim of gaining a better understanding of potential impacts on First Nations and/or rights over a larger geographic area, proponents and government are better able to implement appropriate mitigation actions throughout the term of the approval.

An increased number of MYAB permits have streamlined the administrative processes and decreased the number of applications that need to be considered on an annual basis. MYAB permitting provides more certainty to companies by enabling them to commit to longer-term work programs based on overall projected impacts. It has given companies the flexibility to change the sequence of exploration activities and modify exploration plans as field results dictate within the scope of the approved *Mines Act* permit.

The implementation of MYAB permitting has helped eliminate the need for repetitive referrals involving First Nations, communities, clients, MMRD staff, and other government agencies for the same or similar work in a given area. It has improved communications with First Nations through ongoing sharing of information on the progression of approved exploration activities.

Lessons Learned

While activity-specific oversight is important to ensure health and safety, in terms of First Nations consultation and referrals to other agencies, a multi-year, area-based approach is effective in reducing repetitive annual consultation and referrals for the same exploration project. It can be considered a good practice in community engagement as it helps avoid "consultation fatigue" and diminishes pressures on limited community resources that have to respond to referrals for numerous applications in the same permitted area.

For more information:

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UQAT-UQAM Chair in Mining Entrepreneurship

Leads: Government and universities (Que.)

Steps of the Mineral Development Sequence: Exploration, development, operation

Key Finding: Through the development of entrepreneurial skills, the Chair helps to reinforce community readiness for the exploration and development of mineral resources.

Context

One of the challenges faced by the mining industry concerns the availability of entrepreneurs capable of ensuring the development and growth of businesses operating in the mining industry and the economic benefits resulting from the implementation of projects and the creation of wealth. The mining industry must be prepared to attract competent, young entrepreneurs with well-established management and entrepreneurial skills.

The UQAT-UQAM Chair in Mining Entrepreneurship (Université du Québec en Abitibi-Témiscamingue/ Université du Québec à Montréal) is giving Quebec the means to develop the capabilities of existing entrepreneurs and the skills of new entrepreneurs in the mining industry through an academic program that integrates scientific, technical, and managerial aspects specific to mining companies, including financing.

The Chair receives financial support from the Quebec Ministry of Energy and Natural Resources. The research partnership with the Chair is one of the goals of Quebec's mineral exploration strategy, which consists of improving competitiveness and increasing the economic spinoffs of the mining sector. The Chair is especially concerned with promoting the emergence and development of new Quebec businesses involved in mineral exploration, operations, and refining.

Description of the Measures Implemented

The Chair in Mining Entrepreneurship brings together professors, researchers, and representatives of industry, associations, and the Quebec Ministry of Energy and Natural Resources. The activities of the Chair are designed to address broader objectives, including the creation and promotion of new Quebec businesses involved in the development of mineral resources. More specifically, the Chair is focused on identifying management and technology best practices, testing innovative management and operations models, supporting innovations in sustainable development, and training managers in the mining industry.

Research is carried out through partnerships involving professors and university students, various associations, industry, and the community. The Chair ensures knowledge transfer through seminars, symposia, forums, workshops, and courses, in addition to the publication of articles, research papers, and professional newsletters.

Results

The Chair in Mining Entrepreneurship has carried out research projects that have been instrumental in gaining a better understanding of the governance of small mining companies, innovations in the mining sector, performance indicators applicable to businesses, and the social acceptability of mining projects. It also conducts studies on governance models and analyses of relations with surrounding communities. In addition to being a leader in the research and development of mining business models, the Chair oversees student training and the dissemination of knowledge and expertise. The Chair thus contributes to the elaboration of a model for the responsible development of mineral resources that promotes respect for the environment while leading to the creation of wealth in communities.

In the fall of 2012, the Chair created a graduate program in management applied to the mining industry. This program allows participants to:

- Acquire knowledge on the operational environment of the mining industry and the companies that are part of it, i.e. all companies directly or indirectly involved in all stages of development of the mining process from exploration to the primary processing of minerals, as well as the businesses that provide goods and services resources to those companies;
- Acquire modern management skills in the specific context of businesses opening in the mining industry;
- Learn how to better reflect the principles of sustainable development in decision making; and
- Learn how to cope with the challenges related to the globalization of markets.

Currently, 17 students are attending the program at the UQAT.

Lessons Learned

The Chair's training approach adapted to the mining sector helps develop a local mining entrepreneurship and contributes to the success of mining exploration and mining development companies operating in Quebec.

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Chair on Mining Entrepreneurship
uqat.ca/cem/?lang=fr&menu=accueil

Yukon College: Centre for Northern Innovation in Mining

Context

Yukon's mining industry is rapidly growing with three working mines and several more expected to come on stream in the next five years. These mines need local, committed, and qualified workers who are safety conscious and have a long-term interest in working in the mining industry. In response to the growing demand for a skilled work force, the Centre for Northern Innovation in Mining (CNIM) was established. CNIM delivers training and educational programming in partnership with industry and communities, and also facilitates access to applied research specific to the northern minerals and mining industry.

Leads: Government, industry, and community (Yukon)

Steps of the Mineral Development Sequence: Exploration, development, operation

Key Finding: Delivering training programs in partnership with industry, communities, and educational institutions is the key to high employment success rates for program graduates. A collaborative model of training that includes methods/components that are culturally relevant, delivered in the local communities or at the mine sites, is also important for retaining students in the programs.

CNIM offers dedicated trades facilities at the Yukon College Ayamdigut Campus in Whitehorse and is assembling a mobile trade school, making comprehensive trades training possible anywhere in Yukon that is accessible by road. Training is available through scheduled program delivery or through customized contract training. Mineral companies are welcome to inquire about accessing CNIM's two mine training simulators that are capable of accommodating surface and underground training modules.

Also housed in CNIM are the well-established construction apprenticeship trades, including carpentry, electrical, and oil burner mechanic. CNIM is planning to offer heavy equipment operator, underground mining, pre-apprenticeship heavy equipment mechanic, industrial electrical, and industrial welding programs.

Description of Measures Implemented

To date, CNIM has delivered successful programs in collaboration with industry and communities that resulted in graduates obtaining employment in a related field. One example of this type of program is the Introduction to Mining Operations program. Through a combination of classroom and on-the-job training at Yukon College and in the three operational mines, this 44-day program orients students to the working environment in a producing mine and provides an avenue for students to secure entry-level employment in the mines.

Results

Although CNIM has just recently confirmed its funding for the next five years, the Centre is expected to contribute to the economic viability of Yukon's industry by cultivating a skilled work force within the territory through comprehensive skills and trades training. Such training offers Yukon residents, and those wanting to live and work in Yukon, access to a variety of training opportunities that are nationally recognized and uniquely customized for the North. They aim to help build community capacity for participation in future projects, hence fostering community readiness.

In December 2012, CNIM signed an agreement with the University of Alaska allowing both parties to exchange faculty, curriculum, and students, and linking the mineral resource technologist program at CNIM directly to the mine engineering program at the University of Alaska Fairbanks. The first wave of mining students graduated from CNIM in March 2013.

Lessons Learned

It has been demonstrated that delivering training programs in partnership with industry, community, and educational institutions is the key to high employment success rates for program graduates. This collaborative model of training, delivered in the community or at the mine site, is also important for retaining students in the programs.

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Coalspur Mines Limited's Community Readiness Program

Context

Coalspur Mines Limited is a thermal coal development company with approximately 55 000 hectares of leases located within the Hinton region of Alberta, Canada. Vista, located approximately 280 km west of Edmonton, is Coalspur's flagship project and has the potential to be developed into the largest export thermal coal mine in North America. This large-scale, surface-mineable, thermal coal project covers approximately 10 000 hectares.

Pre-exploration | Exploration | **Development** | Operation | Closure | Post-closure

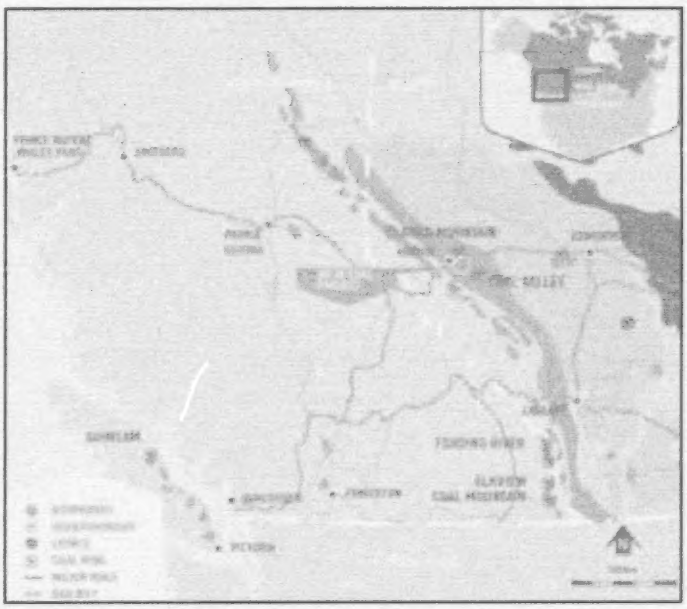
Lead: Industry (Alta.)

Step of the Mineral Development Sequence: Development

Key Finding: Sustaining relationships with affected communities and other stakeholders throughout the life of its operations – not simply during the initial feasibility and assessment phase – improves risk management and will result in better outcomes.

Description of Measures Implemented

Coalspur's Vista project public engagement program and efforts were supported by a four-phase plan for public engagement that tracked the project application as it evolved. The data collected have been presented to assist in corporate project decision making as options were developed, considered, and selected. The public engagement program is ongoing and comprises the following activities:



- Hosting open houses, maintaining an open-door policy, partnering with other industries on community investments and issues within the community, issuing quarterly newsletters, providing information on its corporate Web site, and meeting regularly with stakeholders;
- Ensuring research and understanding the views of stakeholders (for example, Coalspur helped bring together developers, the Town of Hinton, and the local Member of the Legislative Assembly to discuss community housing concerns);
- Encouraging community discussion and welcoming all feedback, as well as using an outside consultant to facilitate community discussions; and
- Regularly scheduled stakeholder meetings and project updates where Coalspur ensures appropriate experts are available, creates action item lists, and follows up on commitments made.

Coalspur has also established and maintained good relationships with government authorities at all levels, keeping them informed of the project's activities and anticipated impacts through regular discussions (quarterly, monthly, or weekly updates).

Results

Partnerships and written agreements have been negotiated and signed with stakeholder groups, such as the three trapline holders: Hinton Fish and Game Association, West Fraser Mills, and the Mountain Cree and Aseniwuche Winewak Nation.

Lessons Learned

Coalspur's public engagement approach for the Vista project has helped to build trust with the local communities. The following elements have been particularly important in fostering community readiness:

- Actively engaging with communities at an early stage of a project is critical to signal the importance of the communities' views and well-being;
- Sustaining relationships with affected communities and other stakeholders throughout the life of its operations – not simply during the initial feasibility and assessment phase – improves risk management and the maximization of benefits, and will result in better outcomes; and
- Communication must be done in good faith with all parties, including those with opposing viewpoints, to ensure their concerns are understood and considered.

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Federal Environmental and Regulatory Processes for Stornoway Diamond Corporation's Renard Diamond Mine Project

Context

Leads: Government (GoC), industry (Que.)

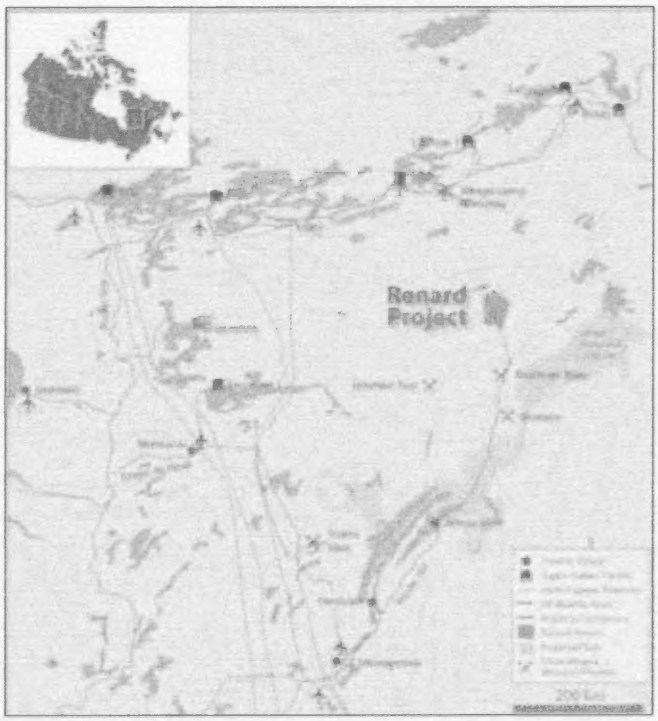
Step of the Mineral Development Sequence: Development

Key Finding: Incorporating Aboriginal traditional knowledge in project planning can result in beneficial outcomes for both parties. In that regard, the federal environmental assessment and regulatory processes can serve as a starting point for communication and dialogue between mine proponents and Aboriginal communities.

The federal environmental assessment process under the *Canadian Environmental Assessment Act*, 2012 is the primary public and Aboriginal consultation mechanism used by the federal government to consult on proposed mine development projects. In fact, the federal environmental assessment process is designed to be an effective tool to:

- Understand the effects of the project on the current use of lands and resources for traditional Aboriginal purposes;
- Understand potential impacts on Aboriginal rights and ensure mitigation is considered to address impacts; and
- Use Aboriginal traditional knowledge to better understand the environmental effects of the project for improved project planning.

A case in point is the federal environmental assessment of the Renard diamond mine project that was completed in 2013. Stornoway Diamond Corporation's (Stornoway) flagship asset is located near the Otish Mountains in north-central Quebec, 250 km from the Cree Nation of Mistissini, and will become Quebec's first diamond mine.



Description of Measures Implemented

In meeting federal environmental assessment and regulatory requirements, and because the Renard project is located on lands where the Cree Nation have specific hunting, fishing, and trapping rights set out in the *James Bay and Northern Quebec Agreement*, Stornoway worked with the federal government, the Grand Council of the Crees, and the Cree Nation of Mistissini to identify and mitigate potential environmental effects. One of the first steps was the creation of the Environmental Exchange Group (EEG) established in October 2010. Even today, this informal forum is used by stakeholders to exchange information on different aspects of the project.

The EEG has been useful for the design and implementation of the Fish Habitat Compensation Plan – a *Fisheries Act* 35(2)(b) requirement — aimed at offsetting any serious harm to fish and fish habitat, and during the preparation of the project's environmental and social impact assessment (ESIA).
In designing the Fish Habitat Compensation Plan, Stornoway engaged and consulted with the Cree Nation to build on their traditional knowledge of the territory over a two-year period. This approach consisted of asking the users of the resource where and how the compensation should happen for their own benefit.

For two years, Stornoway collaborated with the Cree Nation of Mistissini and the Grand Council of the Crees, as well as with experts from Fisheries and Oceans Canada and Environment Canada, to propose the best approach to palliate fish habitat losses and environmental mitigation measures for the project construction and operation. The Cree Nation participated in this process and proposed different possibilities for intervention, including improving existing spawning grounds and remediating a diversion canal at an abandoned copper mine site.

Results

From this close collaboration with the EEG, an optimal project was designed with a view to sustainable development. The finalized compensation plan to be implemented included a number of measures located at the Renard mine site area and the Cree Nation of Mistissini area with targeted measures in place for lake trout, brook trout, and walleye fish habitat. A monitoring program to measure the project's medium- and long-term effects on fish habitat and the effectiveness of the compensation plan was also established by Stornoway in collaboration with the Cree Nation of Mistissini and the Grand Council of the Crees.

Lessons Learned

Aboriginal communities in Canada have different expectations related to mine project development. Consequently, mineral industry proponents can greatly benefit from having an early dialogue with affected communities. Furthermore, incorporating Aboriginal traditional knowledge in project planning can also result in beneficial outcomes for both parties. In that regard, the federal environmental assessment and regulatory processes can serve as a starting point for communication and dialogue between mine proponents and Aboriginal communities.

The elaboration process of the Fish Habitat Compensation Plan used for the Renard diamond mine project is a great example of community engagement to build mutually beneficial outcomes. In this case, the proponent's early communication and engagement with the community as part of the environmental assessment and regulatory processes contributed to a positive outcome for Stornoway, which obtained the social licence to operate its $752 million project.

For more information:

Visit Stornoway Diamond Corporation's web site and click on the environmental and social matters section (stornowaydiamonds.com/renard/esia/) or visit the Mistissini Web site (mistissini.ca/en/home.html) and the Grand Council of the Crees Web site (gcc.ca/gcc/gccnav.php).

Government of the Northwest Territories Socio-Economic Agreements

Context

In the Northwest Territories (N.W.T.), when an environmental assessment takes place for a major resource development project, the territorial government asks for follow-up programs to be put in place in the form of socio-economic agreements (SEAs). They set out the company's commitments and predictions during its environmental assessment and include the following:

Lead: Government (N.W.T.)

Steps of the Mineral Development Sequence: Development, operation

Key Finding: The SEAs ensure N.W.T. residents and local businesses benefit from the opportunities of new developments and mitigate potential negative impacts. They help build community capacity for participation in mineral development and thus foster community readiness.

- Employment and business opportunities;
- Cultural well-being and traditional economy;
- Community, family, and individual well-being;
- Net effects on government; and
- Sustainable development.

The Government of the Northwest Territories (GNWT) oversees the implementation of these agreements and coordinates government efforts under each agreement while monitoring how well each company carries out its respective responsibilities.

Description of Measures Implemented

SEAs are currently in place for De Beers' Gahcho Kué project and Snap Lake mine, Canadian Zinc's Prairie Creek mine, Dominion Diamond Corporation's Ekati mine, and Diavik Diamond Mines (2012) Inc.

The purpose of the agreements is to establish the methods and procedures by which:

- Parties will work together to maximize the beneficial opportunities, identify the impacts, and minimize and mitigate the negative socio-economic impacts arising from the projects;
- Parties will work together to facilitate adaptive management in response to the monitoring data collected and reported by the parties in order to continually improve the implementation of the agreements; and
- The implementation of commitments made regarding socio-economic issues arising from the project and the agreements will be monitored by the GNWT.

For instance, through the terms of its SEAs, De Beers Canada Inc. annually reports on issues such as employment and spending in the territory. The reports outline the mine's activities and include the mine's safety reports (i.e. reportable injuries, time lost), socio-economics (i.e. employment by priority group), the mine's recruitment initiatives, spending (total, northern, Aboriginal people), and its operational and training activities.

Diavik Diamond Mines reports twice a year on employment and spending in the North. The bi-annual reports are submitted to the Diavik Communities Advisory Board (created under the SEA) and to the GNWT. The reports outline the mine's activities with regard to its SEA. The Diavik Project Communities Group Advisory Board reviews and monitors the project's socio-economic impacts and provides recommendations and advice to communities, governments, and the mine operator.

Results

Since 1996, guided by commitments described in each of their SEAs, mining projects in the N.W.T. have created significant and unprecedented benefits for northern Canada. The three diamond mines have provided over 18 000 person-years of northern employment. They have also purchased approximately $10 billion in goods and services from northern businesses and have provided millions of dollars in sponsorships and training to support the development of northern workers' skills.

Lessons Learned

SEAs set out the terms of an effective, ongoing working relationship between the parties in the spirit of cooperation and provide a mechanism for effective communication, consultation, and collaboration. The agreements provide residents with opportunities to undergo training and further education to enhance their existing skills or establish a new career. They are important for the growth of the local economy as the need to match skilled workers to jobs increases. The agreements ensure residents and local businesses benefit from the opportunities of new developments and mitigate potential negative impacts. They help build community capacity for participation in mineral development and thus foster community readiness.

For more information:

The most recent SEA for the Gahcho Kué mine can be found at news.exec.gov.nt.ca/wp-content/uploads/GahchoKue_SEA_June2013.pdf.

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Rapid Growth Communities Team

Context

Lead: Government (Sask.)

Steps of the Mineral Development Sequence: Development, operation

Key Finding: Governments and communities have to plan for the social and environmental requirements and oversight needed because of rapid population and economic growth that comes with mining operations. This may include intensified health services, local infrastructure, housing, security and policing, and educational and medical services. A collaborative regional approach involving representatives from governments, communities, and industry can help provide a better understanding of the type and scale of issues created by regional growth.

The demand for Saskatchewan's resources has created extraordinary economic growth and development in the province. Over the past five years, Saskatchewan's population has grown by nearly 80 000 people.

The growth of several of the larger urban municipalities is primarily from in-migration and from servicing smaller communities in the vicinity. Outside of city regions, this growth is focused in nodes around the locations of resource extraction, such as oil and gas fields, or mines for potash, diamonds, coal, gold, and uranium. Local governments in these sometimes thinly populated regions are often sparsely staffed and challenged to respond to local growth, let alone support the strategic management of regional growth.

A growing population increases pressure on infrastructure such as water and waste-water systems, and transportation and housing infrastructure. Large capital projects like these can strain the capacity and expertise of some municipalities. The Saskatchewan Plan for Growth, announced in October 2012, directed the establishment of a multiministry rapid growth communities team (RGCT) to assist municipalities experiencing rapid growth and assigned its coordination to the Ministry of Government Relations. The team's purpose is to provide a more coordinated, efficient, and streamlined effort to assess and address the impacts of growth on regional services and infrastructure.

Description of Measures Implemented

The Humboldt-Jansen region was selected to pilot implementation of the team because of its experience in managing growth, coupled with the increased economic activity associated with the BHP Billiton Jansen potash mine development.

The team's initial makeup includes eight ministries and five Crown corporations. It is a first-of-its-kind working group of agencies that have a frontline role in helping meet the challenges of growth. A representative of BHP Billiton worked directly with the team throughout its development and deployment in the Humboldt-Jansen region.

BHP Billiton's Jansen potash mine development

The region served by the team is an area encompassing 22 municipalities adjacent to the Jansen potash mine development. The team initially focused on assessing priority provincial and local public infrastructure and services that could be affected by the new Jansen mine development.

Results

The team was formed in early 2013 and held a number of meetings with local officials and BHP Billiton in the Humboldt-Jansen region through the spring and summer. High-level assessments in 13 categories of priority provincial and local infrastructure and services were completed in September and findings were shared with local officials. The team released its Humboldt-Jansen Region Assessment report in December 2013.

The capacity assessments revealed that while the region is generally well positioned to manage growth in many of the infrastructure and service areas assessed, challenges still exist. Several broad priority themes emerged for further discussion at a more technical level: housing, transportation, and water and waste-water infrastructure.

The team has identified preliminary and potential next steps applicable to each assessment. Team members are now meeting with local officials in the region to begin more focused collaboration and to provide technical assistance where possible on housing- and transportation-related issues, municipal water and waste-water infrastructure, municipal borrowing, infrastructure financing, development levies, and servicing agreements.

Lessons Learned

As this innovative approach is a first for the provincial government, and the pilot project is still under way, the lessons learned and the team's role will continue to evolve.

The members, however, have already gained experience in working as an "enterprise-wide" team and have gained better insights into the challenges and issues facing the communities in this pilot project. Teamwork has also strengthened relationships between provincial experts and municipal officials.

It is expected that the assessment report and follow-up activities for the Humboldt-Jansen pilot project will provide a better understanding of the type and scale of issues affected by growth in Saskatchewan. This knowledge can be employed in future RGCT projects across the province to strengthen community readiness for the increased economic activity related to mineral resource development.

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Halfmile Mine Development Project

Context

Pre-exploration | Exploration | **Development** | **Operation** | Closure | Post-closure

Lead: Industry (N.B.)

Steps of the Mineral Development Sequence: Development, operation

Key Finding: Resource companies that engage First Nations communities in a timely manner and that arrive at an agreement prior to the government permitting review avoid possible delays in the process.

The Halfmile mine, owned by Trevali Mining, is a volcanogenic massive sulphide deposit that has been explored since the 1960s. The project is located 70 km northwest of the City of Miramichi, 60 km southwest of Bathurst, New Brunswick, and about 20 km west of the closed Heath Steele mine.

The mine is located in a highly sensitive environment straddling two major watersheds, including a renowned salmon watershed located in the Northwest Miramichi River. The company's approach to the project's development was to minimize surface impact with a small underground operation that involved input from First Nations, stakeholders, and government. The plans included no ore processing on site, no permanent storage of waste rock on the surface, and limited surface storage of ore, directing all runoff to the less sensitive watershed. All site discharge is controlled, and there is a commitment to meet strict Canadian Council of Ministers of the Environment (CCME) guidelines using state-of-the-art Veolia water treatment. All waste rock undergoes rigorous and systematic sampling and sorting for management and ultimate replacement underground as fill. Ore is trucked off-site for milling.

Construction began in 2011 after receiving all approvals, and mining and trucking of ore began in January 2012. As a condition of approval, the company funded a government inspector whose primary function was to monitor and advise operations; this greatly enhanced communication with regulatory agencies. Ore was trucked to the Brunswick mine concentrator (Xstrata) for several months, but ore production was put on hold in August 2012 as Trevali Mining considered other milling options. The limited-term mining project was deemed a relative success, and the company continued to prepare underground development for future production.

Description of Measures Implemented

Project approval in January 2012 was preceded by active consultation with First Nation Mi'kmaq communities resulting in a memorandum of understanding (MOU) with nine bands to include employment opportunities with a target of at least 20 percent of the work force (including any contracting), financial benefits, hiring of a Mi'kmaq Benefits Administrator to identify and promote First Nations opportunities, a student summer employment program, and educational scholarships. The company also worked with government and a community college to develop the First Nations Core Mining Training Program, whose graduates were then hired by Trevali. The company opened an office in Miramichi and is active in positive engagement with government regulators, politicians, community organizations, and charities.

Results

The development approach for this small underground mine project, even though in a highly sensitive location, was successful because it achieved an excellent working relationship with the First Nations, government, and the local community. The project's clean and safe approach to operations to date is a good model for future mining operations.

Lessons Learned

Resource companies that engage First Nations communities in a timely manner and that arrive at an agreement prior to the government permitting review avoid possible delays in the process. In a jurisdiction where First Nations are asserting mineral development rights and the roadmap to consultation and agreement is not necessarily clear or is untested, it is important that companies be timely and proactive in their goal to achieve buy-in and mutual respect.

The conscientious and proactive approach to environmental management, underpinned by harmonious collaboration with the government inspector, has helped establish trust between the company, government regulators, and regional NGOs.

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Mine Training Society

Context

The demand for a skilled work force is growing in the N.W.T. as new mines plan to develop or evolve their current operations in the North. The Mine Training Society (MTS) is a unique partnership between Aboriginal groups, government, and the mining industry. For more than a decade, the MTS has supported Aboriginal peoples and Northerners in finding long-term employment in the mining industry.

Leads: Government, industry, and community (N.W.T.)

Step of the Mineral Development Sequence: Development, operation

Key Finding: The collaboration with all levels of public government, Aboriginal leadership, educational institutions, and businesses that comprise the North's mining industry is essential to the successes of the Mine Training Society and its students. The opportunity to access training in Aboriginal and local communities and gain exposure at local mine sites are key attributes of the programs that contribute to students' success, and thus fosters community readiness.

Description of Measures Implemented

The MTS assists Aboriginal applicants in training-to-employment programs and with obtaining employment in the mine and mine services sector in the N.W.T. The program evaluates applicants, trains, and then places Northerners in meaningful and permanent jobs in the mining and mining-related sectors. Applicants have the opportunity to receive training in their communities and cooperative mine training at mine sites in the N.W.T. They provide hands-on mentoring and job coaching to their clients throughout their careers. The MTS also helps Aboriginal applicants remove barriers to employment, such as criminal records.

The MTS works with mining companies looking for northern employees, as well as local and southern colleges, to tailor the programs to meet industry needs.

Individuals from N.W.T. communities applying for training can access substantial financial support. Assistance for accommodation, food, transportation, utilities, tuition, and books can all be accessed from the GNWT's Department of Education, Culture and Employment through the MTS.

Results

The MTS program benefits go beyond immediate employment; the training provides valuable skills that will remain in the communities. Since its inception in 2003, the MTS has provided more than 1 900 Northerners with training and/or career counselling and has placed more than 830 students in high-paying and fulfilling jobs. Recently, the MTS has partnered with Kitikmeot Inuit Association to deliver mining sector training opportunities to people from the Kitikmeot Region of Nunavut.

N.W.T. residents from smaller communities are provided with the type of skills, trades, and services that are in demand from local industry, and are guided into training that will suit the individual. With the training, local people become more competitive for employment opportunities.

Lessons Learned

Collaboration among all levels of public government, Aboriginal leadership, educational institutions, and businesses that comprise the North's mining industry is essential to the successes of the MTS and its students. The opportunities to access training in Aboriginal and local communities and gain exposure at local mine sites are key attributes of the programs that contribute to students' success and thus foster community readiness.

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Mine Surface Lease Agreement

Context

Mining is an important contributor to the Saskatchewan economy, directly contributing approximately 20 percent of provincial exports. Exports of uranium alone totalled over $1 billion in 2011, a figure that is likely to increase with the new uranium trade agreements with India and China. The richest uranium ore deposits in the world are located in the northern half of Saskatchewan. Six uranium mines, as well as two gold mine/mill projects, are in operation in northern Saskatchewan employing more than 4 000 workers at the sites.

Lead: Government (Sask.)

Steps of the Mineral Development Sequence: Development, operation, closure, post-closure

Key Finding: MSLAs serve as a platform for the relationship between the mining industry and government in northern Saskatchewan. Regular communication among government, industry, and Northerners is essential to building and maintaining relationships. Other essential elements are monitoring industry's achievements and communicating successes to the public to help build and maintain Northerners' trust and confidence in the information shared with them.

Most of northern Saskatchewan, outside of municipalities and Indian Reserves, is provincial crown land. Mining operations in Saskatchewan's North sign a Mine Surface Lease Agreement (MSLA) with the Ministry of Environment and the Ministry of Government Relations. The MSLA provides long-term rental of crown land for mine operations while also obligating the mine operator to use best efforts to maximize benefits for local communities. In the case of uranium mines, it also reinforces provincial control in the regulation of these sites, which are federally regulated as "nuclear facilities."

Description of Measures Implemented

There are 12 MSLAs in effect in northern Saskatchewan covering the life of the mines from construction to reclamation.

Under the terms of the MSLA, each mine operator commits to using its best efforts to maximize northern employment, business participation, education, and training opportunities, as well as to provide compensation for loss of commercial income to traditional land users who previously held the lease or permit for the land. In addition, leases for uranium mining operations include company commitments to education promotion, community vitality, employee services, and public involvement.

Each MSLA requires the mine operator to negotiate a separate Human Resource Development Agreement for the life of the project with the Ministry of Economy. This establishes a collaborative approach designed to maximize recruitment, training, and advancement opportunities for residents of Saskatchewan's North, which also contributes to capacity development so that communities can be "ready" for future development.

Mine operators report their progress to government each year, which assists government in labour force planning and other economic development initiatives. Government, in turn, shares this information with the public in an annual report summarizing the industry's northern initiatives for the previous year.

Results

Mine operations in northern Saskatchewan have embraced the intent of these agreements. This has led to the mining industry in northern Saskatchewan becoming industry leaders in Aboriginal employment and business procurement. On average, 47 percent of all mine-site workers are recruited from northern Saskatchewan and 42 percent of all workers are of Aboriginal heritage. In 2012, mining in northern Saskatchewan contributed $1.78 billion to the provincial economy in wages and goods and services purchased. Northern businesses and joint ventures earned $624 million, or 40 percent of total goods and services expenditures.

The government and mine operators work closely together throughout the life of the mine projects, which helps to develop and maintain harmonious working relationships between the parties. The companies also benefit from a developed and competitive northern business sector, jointly funded training programs, and a trained local labour force.

Lessons Learned

MSLAs serve as a platform for the relationship between the mining industry and government in northern Saskatchewan. The terms of the MSLA are well established so mining companies understand their obligations well ahead of development, providing certainty for industry and maximum benefits for communities. Regular communication among government, industry, and Northerners is essential to building and maintaining relationships. Other essential elements are monitoring industry's achievements and communicating successes to the public to help build and maintain Northerners' trust and confidence in the information shared with them.

La Ronge gold project's Roy Lloyd mine

The surface lease is an evergreen document, evolving to meet northern socio-economic, land leasing, and policy objectives as needed. The design features that have contributed the most to the success of the MSLA include its long-term vision, uniformity across the industry, and commitments to training, public engagement, and reporting. These features have evolved over 40 years, primarily in response to recommendations that emerged from a series of public hearings into proposed new uranium mines from the late 1970s to the late 1990s. Over the past five years, the government has streamlined its negotiation and approval process for the agreements, shaving months off their approval time. Updates to language and content of MSLAs are ongoing to reflect current situations, LEAN processes, and continually strengthened accountability requirements.

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Genesee Coal Mine Reclamation

Context

Pre-exploration | Exploration | Development | Operation | **Closure** | Post-closure

Lead: Industry (Alta.)

Step of the Mineral Development Sequence: Closure

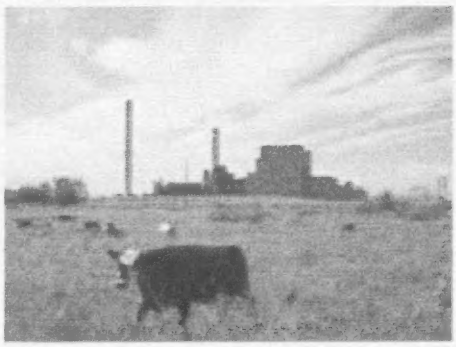
Key Finding: The Community Advisory Task Group (CATG) is a good practice in community engagement as it helps the mine partners better understand the interests and priorities of neighbours in the Genesee area. Since membership in a CATG is diverse, the process enables more community members to participate in the consultation experience.

The Genesee mine, operated by Capital Power and Sherritt Coal, is located about 80 km west of Edmonton. It provides 5.5 million tonnes of coal per year for the Genesee Generating Station, which produces electricity for about 500 000 people. Once the coal in a particular mining area has been depleted, reclamation plans are set into action. The Genesee mine's comprehensive land reclamation plan includes the re-establishment of wetlands and natural creek bodies, and the development of wildlife corridors. The primary objective is to reclaim areas and give them multiple end-use capabilities similar to those that existed prior to mining, including self-sustaining and naturally maturing wildlife habitats through reforestation and re-establishing wetlands.

Description of Measures Implemented

Capital Power and Sherritt Coal have been working in partnership with the University of Alberta and other industrial partners to conduct aspen seedling research on reclaimed mine land. By planting different types of aspen seedlings in various stages of growth and planting conditions, the companies can use the results of the research to facilitate reforestation efforts in the mine. Another emphasis of reclamation efforts has been on the creation of agricultural lands for cattle grazing, hay, and cultivated crops. The partners have also taken on the challenge of re-creating a diverse boreal forest by using new reforestation practices to create natural treed areas within the agricultural landscape.

Capital Power's relationship with its neighbours is an important focus of its Genesee operations. To encourage rapport, the company expanded its outreach efforts to include a Community Advisory Task Group (CATG). The purpose of a CATG is to bring together small groups of people, representing a variety of viewpoints within a community, typically to work on a specific task. CATG members are selected by Kairos Creative Solutions, an independent company now working with Capital Power. The process is designed to select applicants according to community, distance from the Genesee Station, age categories, gender, background, and interests. In general, CATG participants are asked to provide advice and suggestions on a variety of topics related to the task.



Reclaimed agricultural land at the Genesse mine, Alberta

The Genesee CATG was established to provide Capital Power with advice on future operations at Genesee and to provide input on the following topics, which were identified as important during outreach and dialogue activities:

- Improving Capital Power Genesee Operations' and Sherritt Coal's dialogue; and
- Outreach, community involvement, and responsiveness on a range of operational and community initiatives.

Since 2012, an update from each of the three yearly CATG meetings is provided in the Genesee Connection Newsletter, which is publicly available on the company Web site.

Results

Environmental work at the Genesee mine has returned 600 hectares to productive farm land and wildlife habitat, earning the mine partners the 2009 Alberta Chamber of Resources' (ACR) Major Reclamation Award, which recognizes the mine's reclamation goals and achievements, past and current reclamation research initiatives, and ongoing communication and involvement with the community.

The mine partners have also been leasing reclaimed land and company-owned land not yet used for operations to local farmers, allowing them to bring their cattle to a well-managed grassland operated by professional range managers.

Lessons Learned

The CATG is a good practice in community engagement as it helps the mine partners better understand the interests and priorities of neighbours in the Genesee area. Since membership in a CATG is diverse, the process enables more community members to participate in the consultation experience.

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Luscar and Gregg River Mines Land Management Plan

Context

The Luscar and Gregg River mines are located in Alberta's historic Coal Branch on the eastern slopes of the Rocky Mountains. The Gregg River mine operated on 1 252 hectares and the Luscar mine operated on 3 200 hectares. Whitehorse Wildland Provincial Park lies south of the Luscar and Gregg River mine sites, and Jasper National Park (JNP) lies to the west of both mines, separated by a strip of Crown land. At its closest point, JNP is less than 4 km away from the reclaimed lands.

Leads: Government and industry (Alta.)

Steps of the Mineral Development Sequence: Closure, post-closure

Key Finding: The Luscar and Gregg River Mines Land Management Plan has established the involvement of stakeholders, Aboriginal groups, and the public as a much-needed component of a planning initiative. The involvement of these various groups has been instrumental in reducing conflicts and providing general direction for the plan.

Subsurface coal mining in the area began in 1911. Modern open-pit coal mining in the Luscar and Gregg River mines area started in 1969 to supply coal for overseas markets. The Gregg River and Luscar mines closed in 2000 and 2003, respectively. The planning area encompasses a significant contiguous area of mine lands of more than 7 100 hectares within which 3 300 hectares were disturbed.

Description of Measures Implemented

Between 2006 and 2011, Alberta Environment and Sustainable Resource Development (ESRD), in collaboration with Teck Resources Ltd. and Coal Valley Resources Inc., used an integrated land management approach and developed a land management plan (LMP) that is characterized as a Regional Integrated Decision (RID) for public land in the Luscar and Gregg River coal mines area.

The methodology employed for land management planning involved communities, interest groups, and the public. The process engaged stakeholders representing a variety of community interests to establish a vision for the area that would allow for management of the reclaimed habitat and the reintroduction of wildlife populations along with reasonable and appropriate human use, thus providing opportunities for interpretation, education, recreation, and ecotourism.

The project involved seven major stages, including project initiation, data and information gathering, scenario development, draft LMP, LMP approval, LMP implementation and, lastly, monitoring and evaluation. Public and stakeholder participation occurred concurrently with various stages of the project to ensure that the public, directly affected stakeholders, and identified communities of interest (e.g. communities, industry, conservation, recreational users, and traditional land users) had meaningful opportunities to influence the design and development of the LMP. Aboriginal communities were engaged in accordance with the Government of Alberta's Aboriginal Consultation Guidelines.

Results

To date, reclamation of about 100 percent of the Gregg River mine and about 50 percent of the Luscar mine's disturbed area has been completed (earthwork and initial revegetation completed, forest establishment in progress) and reclamation is ongoing on the remaining disturbed areas. The reclamation has resulted in the re-establishment of the area as part of the home range of wildlife species, including bighorn sheep, elk, and provincially threatened species such as grizzly bear and Athabasca rainbow trout. In addition to these prominent species, significant wildlife diversity has emerged and continues to evolve.

The process has provided an opportunity for collaboration among provincial and local government, industry, Aboriginal groups, and the public to explore opportunities to develop a more strategic and integrated land management approach to end-of-life land-use planning. The planning initiative has been instrumental in creating a forum to discuss several conflicting values, to share and improve understandings, and to come to an agreement on common management strategies.

Lessons Learned

The Luscar and Gregg River Mines LMP has established the involvement of stakeholders, Aboriginal groups, and the public as a much-needed component of a planning initiative. The involvement of these various groups has been instrumental in reducing conflicts and in providing general direction for the plan. The process was challenging because of differences of opinion and sometimes conflicting priorities; however, dialogue and communication at the initiation of the planning process helped overcome these conflicts. Collaboration resulting from engagement forums has been particularly beneficial and should be considered an example of a good practice in community engagement and readiness. This collaboration has helped dispel negative perceptions, created a better understanding of constraints, and provided the opportunity for participants to explore and appreciate the opportunities that post-mine landscapes afford for biodiversity conservation and other land uses.

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Restor-Action Nunavik Fund

Context

Leads: Government, industry, and community (Kativik Regional Government) (Que.)

Step of the Mineral Development Sequence: Post-closure

Key Finding: The Fund contributes to community readiness by reinforcing the capacities of local populations. The participation of local communities in the cleanup of abandoned mine sites also helps foster confidence among the community in the development of mineral resources.

Many former mineral exploration sites located in northern Quebec were left in need of cleanup and reclamation. This situation created an opportunity to establish partnerships with regional stakeholders so the cleanup work could go ahead and, at the same time, it created employment opportunities for the local population.

The Restor-Action Nunavik Fund was thus created through funding from the Government of Quebec and the financial contributions of participating mining companies. This initiative, which also involves the Kativik Regional Government, was instrumental in the reclamation of several mine sites and in the creation of jobs in the local communities.

Description of Measures Implemented

The Government of Quebec allotted a budget of $4.1 million to implement Phase I of the Restor-Action Nunavik Fund, which involved the reclamation of major sites between 2007 and 2012. The Kativik Regional Government is responsible for managing and coordinating the cleanup, including the removal of hazardous waste, the combustion or removal of non-toxic waste to a landfill site, and the transportation of heavy equipment to recycling facilities.

The original agreement was extended to 2017, enabling the cleanup of additional sites. Further cleanup operations will be carried out with the funding from the initial government budget as the costs to date have been lower than anticipated.

Results

From 2007 to 2013, the cleanup of most major sites and a few medium-sized sites involved, in particular, the removal of approximately 7 500 barrels, 24 000 litres of diesel fuel, 2 000 litres of motor oil, 250 propane cylinders, 30 pieces of heavy equipment, and 20 tonnes of metal waste. The cleanup operations created 100 seasonal jobs for the local communities. The initiative also led to the following results:

- A positive impact on the environment;
- Local workers gained valuable experience in the cleanup of abandoned mining exploration sites and more general experience that may be transferable to other sectors;
- A feeling of pride among the Inuit communities due to their involvement in the project and in the achievement of positive results; and
- Helped foster a sense of responsibility among land users.

In addition, the Fund has become a reference point in the rehabilitation of abandoned mine sites in Canada and has inspired similar initiatives in other regions of Quebec and in other provinces. It has been awarded the following:

- The Environmental Excellence Award for mineral exploration in Quebec in 2007; and
- The Environmental Excellence Award for mineral exploration in Canada in 2008.

Lessons Learned

The Fund contributes to community readiness by reinforcing the capacities of local populations. The participation of local communities in the cleanup of abandoned mine sites also helps foster confidence among the community in the development of mineral resources.

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Northern Saskatchewan Environmental Quality Committee

Context

Lead: Government (Sask.)

Steps of the Mineral Development Sequence: Pre-exploration, exploration, development, operation, closure, post-closure

Key Finding: By ensuring Northerners have a regular, formal means to address their concerns and provide input into decisions by companies and regulators, the NSEQC helps to build trust among Northerners, Saskatchewan's uranium industry, and regulators, hence fostering community understanding of, and support for, mineral development activities.

The northern half of Saskatchewan is home to about 37 000 people, or 4 percent of the province's population. They are mostly of Aboriginal heritage, living in 35 small municipalities and 35 reserve communities. The richest uranium ore deposits in the world are located in this region. Six uranium mine/mill projects are in operation in northern Saskatchewan, employing almost 4 000 workers at the sites.

The uranium mining industry in northern Saskatchewan underwent a major expansion in the 1990s. In response to the requests for approvals for five new mines proposed at that time, a series of public hearings were held by a Federal-Provincial Joint Review Panel. Northerners voiced their interest in the socio-economic benefits that would be derived from the operations and from participating in an environmental monitoring committee. The Government of Saskatchewan responded to the Panel's initial report and recommendations by establishing the Northern Saskatchewan Environmental Quality Committee (NSEQC) initiative to engage Northerners in decisions concerning the development and operations of the uranium industry. The committee acts as a key communications bridge between the uranium industry and northern residents.

Description of Measures Implemented

Since 1995, authorization for the NSEQC program has been renewed every five years by a Government of Saskatchewan Order-In-Council. Membership consists of 78 primary and alternate community representatives. The Ministry of Government Relations provides an annual budget for members' travel expenses, meeting facilities, and two staff positions. Uranium companies provide in-kind support for mine-site tours, workshops, and conferences.

NSEQC touring the Cigar Lake project in northern Saskatchewan

The Northern Mines Monitoring Secretariat (NMMS), established at the same time as the NSEQC, meets twice yearly. The NMMS has representatives from key provincial and federal ministries and agencies involved in the development and regulation of Saskatchewan's uranium industry. It provides professional, administrative, and technical support to the NSEQC's operations and regularly advertises members' programs and services supporting the industry's developments and operations.

The NSEQC's credibility in fulfilling its mandate is based on a number of design features. First, the NSEQC is an apolitical structure comprised of First Nations, Métis, and non-Aboriginal representatives drawn from northern reserves and municipalities that are representative of the geographic region within which the uranium companies operate. Second, the communities' leadership nominates their NSEQC representatives, who are then appointed by Minister's Order for terms of up to two years.

In addition, accountability is built into the program: each five-year term concludes with a review of the program's current and future relevance and value to the industry, regulators, and northern communities.

Results

The NSEQC continues to grow and reinforce the relationship among industry, government regulators, and the people. This 19-year-old initiative continues to serve important functions, including helping to increase Northerners' (and the public's) understanding of the uranium industry and boost the attractiveness of the northern Saskatchewan investment platform. It also provides examples of the wide range of job opportunities available to youth and community members in both the mining and regulatory fields. From a regulatory perspective, the NSEQC helps regulators fulfill their responsibilities with informed public input into their decisions on northern uranium mines/mills projects.

McArthur River mine site in northern Saskatchewan

More than 300 Northerners have participated on the NSEQC since 1995. The NSEQC has helped increase their understanding of the industry and their appreciation of its opportunities and challenges by providing an opportunity to monitor uranium mining developments, regularly visit mine sites, and discuss uranium development with mining companies and regulators.

The NMMS provides an opportunity for regulatory officials from a number of ministries/agencies to come together to discuss industry operations, development plans, issues or trends affecting the industry, and its relations with Northerners, as well as the NSEQC's operations, priorities, and requirements.

Lessons Learned

By ensuring Northerners have a regular, formal means to address their concerns and provide input into decisions by companies and regulators, the NSEQC helps to build trust among Northerners, Saskatchewan's uranium industry, and regulators, hence fostering community understanding of, and support for, mineral development activities.

For more information:

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Conclusion

One of the objectives of this Compendium is to promote good practices at each stage of the mineral development sequence to better inform stakeholders and communities affected by mineral exploration and mining. It is hoped that the information compiled in this Compendium will help industry, governments, and communities develop and implement initiatives that replicate success across Canada.

While the initiatives highlighted in the case studies are unique to their respective contexts, one important thing they reveal is that partnerships between governments, industry, and communities are a clear leading practice at each stage of the mineral development sequence and help to alleviate some of the issues and concerns that act as barriers to maximizing benefits. Relationships developed through collaboration and dialogue among communities, governments, and multiple stakeholders offer the opportunity to gain a better reciprocal understanding, establish trust, develop respect, and identify mutually beneficial goals in a transparent manner. The forging of partnerships can foster the development of local solutions that reflect a particular community's needs and values. It can allow long-term planning to account for and consider stakeholders' needs across the mineral development sequence, enabling better strategic alignment of resources with development opportunities and creating an opportunity for local businesses to thrive. Therefore, improving collaboration between all parties involved in mineral projects is essential to implement potential solutions that strengthen the social, human, economic, and cultural capital of a specific region or community.

Moving forward, it is expected that this Compendium will help provide important lessons on how to promote good practices and facilitate the development of resources while ensuring local benefits. This report could also pave the foundation for exploring further work around community development and engagement. Many communities across Canada have successfully benefited from the development of mineral resources. They have been able to improve the infrastructure in their local communities, benefit from business opportunities, and acquire skills and employment opportunities. Learning and identifying how local communities have benefited from mineral development, identifying what worked and what did not work, and understanding the factors of success around these communities are important elements that require further research.

Similarly, exploring a holistic approach that aligns and brings all the various partners within a region together to identify mining opportunities and challenges, provides a space for dialogue and planning, and leverages common efforts toward common goals is also a topic that needs further consideration. In order to promote this effort, the mineral development sequence could be used as a planning tool to guide the discussion among various partners (e.g. communities, industry, governments), understand the magnitude of investments required and help prioritize efforts, and promote local engagement and ensure community acceptance and readiness. These efforts would be beneficial to:

- Provide a common frame of reference for dialogue, building trust, and collaboration;
- Outline a path forward between various stakeholders and Aboriginal communities, linking a common vision to objectives and actions;
- Facilitate the orchestration of multiple activities, planning, and sequencing
- Orient investment in the right places by various stakeholders, clarifying roles and responsibilities; and
- Identify mineral opportunities and local benefits to facilitate community acceptance and readiness.

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